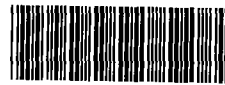


August 1, 1997

US EPA RECORDS CENTER REGION 5



1000303

Mr. Thomas G. McSwiggin, Manager
Permits, Industrial Unit
Bureau of Water
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62794-9276

RE: CHEMETCO, INC.
Hartford, Illinois
FACILITY EPA I.D. # IL 048843809

APPLICATION(S) FOR NPDES TREATMENT SYSTEM
OUTFALL 004

Dear Mr. McSwiggin:

Enclosed please find the application(s) for the installation of a stormwater treatment system proposed for installation at the above referenced facility. Due to the pending closure of the on-site (RCRA) cooling water canals presently used for stormwater retention and the need for an alternate method of stormwater management (in comparison to the present closed-loop system), Chemetco is herein applying for permit(s) to construct and operate an all-inclusive stormwater treatment system prior to discharge to Long Lake (as Outfall 004) Outfall 004 will subsequently replace existing Outfall 002 and temporary Outfall 003. The treatment system will additionally be utilized to treat the groundwater generated from the SID (Subsurface Intercept Drainage) System and the treated sanitary wastewater effluent, which presently is discharged into the closed-loop system.

Should you have any further questions, please feel free to contact the undersigned at 217/522-4085, or Walter G. Shifrin, Shifrin & Associates, Project Design Engineer @ 314/721-2249..

Sincerely,

Cindy S. Davis
President

cc: Greg Cotter, Chemetco
George m. von Stamwitz, Armstrong, Teasdale et.al.



2220 Yale Blvd., Springfield, IL 62703 • Phone 217-522-4085 • FAX 217-522-4087



APPLICATION FOR NPDES STORMWATER PERMIT
(OUTFALL 004)

AND

APPLICATION FOR JOINT CONSTRUCTION AND OPERATING PERMIT
STORMWATER\GROUNDWATER) TREATMENT SYSTEM

PREPARED FOR:

CHEMETCO
Route 3 & Oldenburg Road
Hartford, Illinois 62048

JULY 1997

CSD



Environmental Services Inc.

2220 Yale Boulevard
Springfield, IL 62703
(217) 522-4085

APPLICATION FOR NPDES STORMWATER PERMIT (OUTFALL 004)
AND
APPLICATION FOR JOINT CONSTRUCTION AND OPERATING PERMIT
STORMWATER TREATMENT SYSTEM

CHEMETCO
Route 3 & Oldenburg Road
Hartford, Illinois 62048

ATTACHMENT 6:

Pollution Prevention Controls

JULY 1997

CHEMETCO, INC.
Hartford, Illinois

POLLUTION PREVENTION CONTROLS

Structural Controls:

Prior to stormwater discharge into the equalization impoundment (located South of Oldenburg Road), all stormwater will be routed to the in-plant settling basins to be constructed from the former cooling water canals. The cooling canals are intended for closure under RCRA. At such time closure is achieved, the cooling canals will be reconstructed as the settling basin component of the stormwater/groundwater treatment system proposed as part of the NPDES Discharge permit (Outfall 004). These units will allow for the settling of heavy solids, i.e., high metal-bearing materials, including zinc oxide, slag, etc. from the stormwater prior to transfer to the equalization impoundment located adjacent to the proposed Treatment Plant Operations. Refer to Figure 2. The settling basins will be monitored for solids accumulation and maintenance performed on an as-needed basis. Maintenance will be performed on one basin at a time to allow for the necessary stormwater retention/settling capacity. The basin designated for maintenance will be shutdown and drained. The solids from the settling basins will be removed by means of heavy machinery, i.e., loaders. The materials will be assayed for metal content and/or re-processed on-site, sent off-site for recycling at El-Met, Spain or properly qualified for disposal off-site.

From the settling basins, the stormwater will be transferred into the equalization basin for retention prior to treatment (by means of coagulation, chemical precipitation and sand filtration) prior to discharge of the treated stormwater* to the unnamed tributary of Long Lake through Outfall 004. Generated sludge will be dried by pressing and recycled.

All aboveground (petroleum fuel) storage tanks are equipped with secondary containment. Additionally, all hazardous materials stored within 55 gallon drums will either be stored within hazardous materials storage buildings or equipped with a separate secondary containment system for separate monitoring and management, as necessary.

Non-Structural Controls:

Chemetco has a Pollution Prevention Plan developed specifically for Outfall 002. Chemetco intends to maintain the provisions of this Plan and apply the Plan to Outfall 004 (which will replace Outfall 002). This Plan specifies the procedures to address plant-wide inspections which will accommodate the identification and removal of any leaks, spills or other releases that occur at the plant. A copy of the current Pollution Prevention Plan is enclosed herein under Attachment 6.

*Note: Stormwater will constitute the primary flow contribution of the treatment system. The combined flow will also include treated sanitary wastewater and groundwater generated from the SID System. Presently, the SID system is utilized for make-up water in the plant's processes. To accommodate the generated volumes, Chemetco is proposing to add this stream to the treatment system, as needed.

FILE COPY

STORMWATER POLLUTION PREVENTION PLAN

PREPARED FOR:

**CHEMETCO, INC.
ROUTE 3 & OLDENBURG ROAD
HARTFORD, IL 62048**

JANUARY 1997

CSD



Environmental Services Inc.

2220 Yale Boulevard
Springfield, IL 62703
(217) 522-4085

Emergency Contact: Kevin Youngblood 618-254-4381
Treatment Plant Operator

Secondary Contact: **Greg Cotter** **618-254-4381**
 Environmental Coordinator **Ext:219**

Type of Facility: secondary Copper Smelter

Operating Schedule: 24 hours a day

Number of employees: Approximately 150

POLLUTION PREVENTION TEAM

Worksheet

Completed by: Greg Cotter

Title: Environmental Coordinator

Date: 1-2-97

MEMBER ROSTER

Leader: Greg Cotter

Title: Environmental Coordinator

Office Phone: 618-254-4581 Ext:219

Responsibilities:

Environmental Compliance

Members:

(1) Kevin Youngman

Title: Treatment Plant Operator

Office Phone: 618-254-4381

Responsibilities:

Treatment Plant Operator

(2)

Title:

Office Phone:

Responsibilities:

(3)

Title:

Office Phone:

Responsibilities:

(4)

Title:

Office Phone:

Responsibilities:

DEVELOPING A SITE MAP

Worksheet #2

Completed by: Greg Cotter

Title: Environmental Coordinator

Date: 1-2-97

Instructions: Draw a map of your site including a footprint of all buildings, structures, paved areas, and parking lots. The information below describes additional elements required by EPA's General Permit.

EPA's General Permit requires that you indicate the following features on your site map:

- All outfalls and storm water discharges -
- Drainage areas of each storm water outfall
- Structural storm water pollution control measures, such as:
 - Flow diversion structures
 - Retention/detention ponds
 - Vegetative swales
 - Sediment traps
- Name of receiving waters (or if through a Municipal Separate Storm Sewer System)
- Locations of exposed significant materials
- Locations of past spills and leaks
- Locations of high-risk, waste-generating areas and activities common on industrial sites such as:
 - Fueling stations
 - Vehicle/equipment washing and maintenance areas
 - Area for unloading, loading materials
 - Above-ground tanks for liquid storage
 - Industrial waste management areas (landfills, waste piles, treatment plants, disposal areas)
 - Outside storage areas for raw materials, by-products, and finished products
 - Outside manufacturing areas
 - Other areas of concern (specify: _____)

Date: 1-2-97

[illegible]

DESCRIPTION OF EXPOSED SIGNIFICANT MATERIAL

Worksheet #3A

Completed by: Greg Cotter

Title: Environmental Coordinator

Date: 1-2-97

Instructions: Based on your material inventory, describe the significant materials that were exposed to storm water during the past three years and/or are currently exposed. For the definition of "significant materials" see page 5 of this summary.

[illegible]

LIST OF SIGNIFICANT SPILLS AND LEAKS

Worksheet #4

Completed by: Greg Cotter

Title: Environmental Coordinator

Date: 1-2-97

Directions: Record below all significant spills and significant leaks of toxic or hazardous pollutants that have occurred at the facility in the three years prior to the effective date of the permit.

Definitions: Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

[illegible]

POLLUTANT SOURCE IDENTIFICATION
(Section 2.2.6)

Worksheet #7

Completed by: Greg Cotter

Title: Enrivornmental Coordinator

Date: 1-2-97

Instructions: List all identified storm water pollutant sources and describe existing management practices that address those sources. In the third column, list BMP options that can be incorporated into the plan to address remaining sources of pollutants.

Storm Water Pollutant Sources	Existing Management Practices	Description of New BMP Options
1. Scrap Metal Piles	All runoff of stormwater is used in the plant as make up water/no discharge.	Same as existing
2. Slag Pile	" " "	" "
3. Zinc Oxide Bunker	Secondary Containment	"
4. Diesel Fuel	" "	"
5. Waste Oil	" "	"
6. Chemicals (Maintenance)	All runoff of stormwater is used in the plant as make up water/no discharge	Secondary containment to be provided.
7.		
8.		
9.		
10.		

BMP IDENTIFICATION
(Section 2.3.1)

Worksheet #7a

Completed by: Greg Cotter

Title: Environmental Coordinator

Date: 1-2-97

Instructions: Describe the Best Management Practices that you have selected to include in your plan. For each of the baseline BMPs, describe actions that will be incorporated into facility operations. Also describe any additional BMPs (activity-specific (Chapter 3) and site-specific BMPs (Chapter 4)) that you have selected. Attach additional sheets if necessary.

BMPs	Brief Description of Activities
Good Housekeeping	Haz mat building to be constructed onsite for storage of maintenance chemicals.
Preventive Maintenance	Any spills in the mobil shop are to be immediately cleaned up using oil dry. Oil dry will be swept up daily and properly disposed
Inspections	Daily inspection of 1) Mobil shop for oil and antifreeze. 2) Secondary cont. of AST's. 3) Any areas where oils/fuels or other chemicals are stored.
Spill Prevention Response	All leaks to be reported to environmental manager immediately.
Sediment and Erosion Control	Most of plant is a concrete surface. A large majority of the plant is slated to be concreted within the next 5 years.
Management of Runoff	All runoff is collected and used in plant operations. A small amount of runoff from the southern portion of the plant is permitted as a discharge through an NPDES permit.
Additional BMPs (Activity-specific and Site-specific)	None

CHEMETCO, INC.
HARTFORD, IL.

SIDS ANALYTICAL RESULTS

1997			SIDS Data Average	Combined Flow Max. Conc. *	General Discharge Std.
PARAMETER	FIRST QUARTER	SECOND QUARTER			
As	<0.005	<0.05	<0.05	—	0.25
Cd	<0.05	<0.005	0.199	2.91	0.15
Cr	0.050	0.03	0.0265	—	1.0
Cu	55.2	47.6	70.8	3.84	0.5
Ni	47.5	74.0	73.9	18.5	1.0
Pb	0.64	0.119	0.489	2.57	0.2
Sn	<0.1	<1.0	<1.0	—	(*)
Zn	20.7	21.4	19.4	13.87	1.0
pH (units)	3.95	5.39	4.4		6-9
Sc (umhos)	3480	5000	-		NA
TOC	4.23	2.79	6.51		
TOX	0.06	0.10	-		

Notes:

Results are in mg/l;

Samples exceeding the General Use Standards as defined under 35 IAC Subtitle C, Section 304 are highlighted.

* COMBINED FLOW = SIDS + STORMWATER:

$$\text{Max. Conc.} = \frac{\text{Stormwater} \quad \text{SIDS}}{103 \text{ gpm}} = \frac{(100 \text{ gpm ave.} \times \text{max. conc.}) + (3 \text{ gpm ave.} \times \text{max. conc.})}{103 \text{ gpm}}$$

Prairie Analytical Systems, Inc.

An Environmental and Agricultural Testing Laboratory



Page 1 of 1

CSD Environmental, Inc.
2220 Yale Boulevard
Springfield, IL 62703

Date Sampled: 18 February 1997
Date Received: 19 February 1997
Date Analyzed: 25 February 1997
Date Reported: 26 February 1997

Project: Chemetco


PAS Project Code: CSD-148

Sample Description: Storm Water

PAS Sample No.: 9702190698

Inorganic Compound Analysis

Analytes	Detection Limit mg/l	Result mg/l	E.P.A. Method
Oil & Grease	0.5	3.2✓	9070
Total Suspended Solids	1.0	9.5 ✓	2540D
COD	20	<20	5220D
BOD ₅	1	16.7✓	5210B
Ammonia (as N), Total	0.10	9.1	4500-NH ₃ -F
Phosphorus, Total	0.05	0.33 ✓	6010A
Boron	0.005	13.9	6010A
Cadmium	0.004	2.58 ✓	6010A
Copper	0.006	0.27 ✓	6010A
Lead	0.042	0.37 ✓	6010A
Manganese	0.002	0.09	6010A
Nickel	0.015	<0.015 ✓	6010A
Silver	0.007	<0.007 ✓	6010A
Zinc	0.002	13.6	6010A
Iron	0.007	0.03	6010A
Total Residual Chlorine	0.1	<0.1	4500-Cl
pH (Units)	---	8.20	4500-H ⁺


Stephen R. Johnson, Laboratory Director

P.O. Box 8326 • 205 Main Terminal • Capital Airport • Springfield, IL 62791-8326 • (217) 753-1148



Certificate of Analysis

Mr. Kevin Bunting:
Environmental Systems, Inc.Client Project ID : Chemetco
Chain of Custody #: 2677

Lab Project Number: 030397.02

Client Sample ID:	Stormwater Before ←	Date Collected:	Not Available
Lab Sample ID:	A0316	Date Received	03/03/97

Metals

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Detection Limit</u>	<u>Analyst</u>	<u>Date Analyzed</u>	<u>Method</u>
Lead	0.472	mg/L	0.050	KEZ	03/05/97	6010
Copper	0.387	mg/L	0.050	KEZ	03/05/97	6010
Cadmium	2.99	mg/L	0.016	KEZ	03/05/97	6010
Iron	0.820	mg/L	0.011	KEZ	03/05/97	6010
Zinc	8.59	mg/L	0.006	KEZ	03/05/97	6010
Manganese	0.148	mg/L	0.003	KEZ	03/05/97	6010

Wet Chemistry

Total Suspended Solids	74	mg/L	2	KEZ	03/05/97	6010
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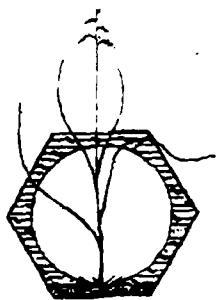
Client Sample ID:	Impound Before	Date Collected:	Not Available
Lab Sample ID:	A0317	Date Received	03/03/97

Metals

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Detection Limit</u>	<u>Analyst</u>	<u>Date Analyzed</u>	<u>Method</u>
Lead	0.043	mg/L	0.050	KEZ	03/05/97	6010
Copper	0.119	mg/L	0.050	KEZ	03/05/97	6010
Cadmium	0.099	mg/L	0.016	KEZ	03/05/97	6010
Iron	0.728	mg/L	0.011	KEZ	03/05/97	6010
Zinc	2.05	mg/L	0.006	KEZ	03/05/97	6010
Manganese	0.597	mg/L	0.003	KEZ	03/05/97	6010

Wet Chemistry

Total Suspended Solids	83	mg/L	2	KEZ	03/05/97	6010
------------------------	----	------	---	-----	----------	------



Prairie Analytical Systems,

An Environmental and Agricultural Testing Laboratory

CSD Environmental Services
2220 Yale Boulevard
Springfield, IL 62703

Date Sampled: 18 April 1997
Date Received: 18 April 1997
Date Analyzed: 22 April 1997
Date Reported: 23 April 1997

Project: Chemetco

PAS Project Code: CSD-158

Sample Description: STW-1

PAS Sample No: 9704181971

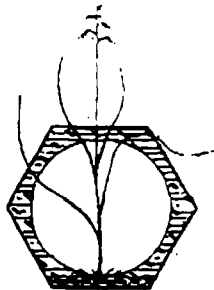
Inorganic Analysis

<u>Parameters</u>	Detection Limit mg/l	Result mg/l	E.P.A. Method
Total Organic Carbon	0.1	19 ✓	9060


Stephen R. Johnson, Laboratory Director

P.O. Box 8326 • 205 Main Terminal • Capital Airport • Springfield, IL 62791-8326 • (217) 753-1148





Prairie Analytical Systems, Inc.

An Environmental and Agricultural Testing Laboratory



Page 1 of 1

CSD Environmental Services, Inc.
2220 Yale Boulevard
Springfield, IL 62703

Date Sampled: 20 May 1997
Date Received: 21 May 1997
Date Analyzed: 23 May 1997
Date Reported: 27 May 1997

Project: Chemetco

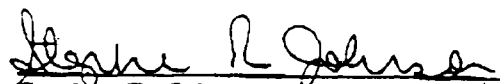
PAS Project Code: CSD-167

Sample Description: E-W STW

PAS Sample No.: 9705212880

Total Metal Analysis

Analytes	Detection Limit mg/l	Result mg/l	E.P.A. Method
Lead	0.04	0.84	6010A
Zinc	0.002	0.97	6010A
pH (Units)	—	9.18	4500-H ⁺


Stephen R. Johnson, Laboratory Director

P.O. Box 8326 • 205 Main Terminal • Capital Airport • Springfield, IL 62791-8326 • (217) 753-1148

Form PAS-RSLEAD1



TOTAL P.02

Chain of Custody Record

Page ____ of ____

Prairie Analytical Systems, Inc. - 205 Main Terminal, Capital Airport - Springfield, IL 62707

Client	CSD ENV. SERVICES, INC.	Project	CHEMETCO
Address	2220 YALE BLVD.	Contact Person	CINDY DAVES
City, State, Zip	SPRINGFIELD, IL 62703	P. O. #/ Invoice to:	
Phone Number	217/522-4085	Facsimile Number	217/522-4087

Sample Description (10 Characters ONLY)	Sample Matrix	Sampling		Container		Preservative	Analysis Requested	PAS Sample Number
		Date	Time	Size	No.			
E-W CANAL	H ₂ O	7/2	PM	2-40ml 2-250ml 1-500ml	6		SEE ATTACHED	3673
N-S CANAL	H ₂ O	7/2	PM	1-4L 1-11	6		"	3674
OIL DRUM	SOLID	7/2	PM	6AL BAG	1		TCLP METALS & TCLP ORGANICS	3675
							IF TCLP METALS PASS, THEN RUN	
							PF FUSED PH CWS PHENOLICS & SMOGS	
							PLB'S	

Relinquished by: <i>Shane A. Thayer</i>		Received by: <i>Mellie Rose</i>	
Date: 7/3/97	Time: 9:55A	Date: 07/03/97	Time: 9:55 AM
Relinquished by:		Received by:	
Date:	Time:	Date:	Time:

SPECIAL INSTRUCTIONS:

PAS Project CODE: CSD-181

NORWECO.
NORWALK WASTEWATER EQUIPMENT COMPANY

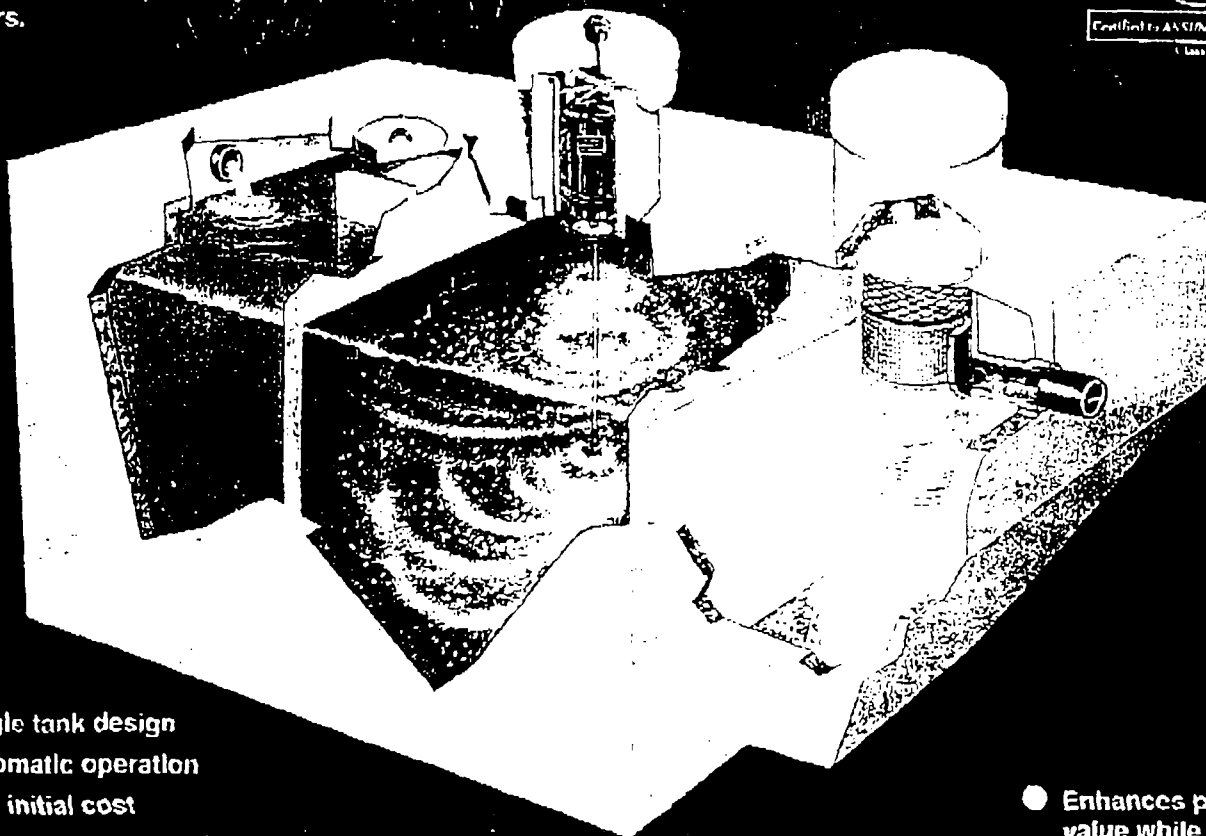
SINGULAIR® BIO-KINETIC™

WASTEWATER TREATMENT SYSTEM

Automatically reduces all domestic wastewater to a clear, odorless liquid in just 24 hours.

NSF.

Certified to ANSI/NSF Standard 40
(Class 1)

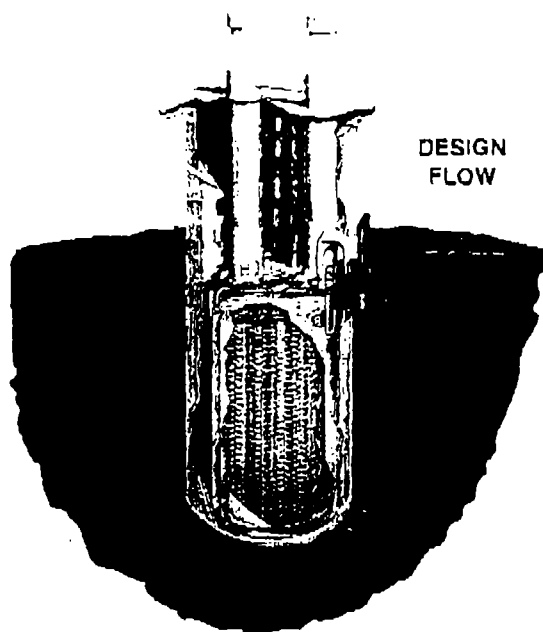


- Single tank design
- Automatic operation
- Low initial cost
- Precast concrete tank
- Equipment fully guaranteed

- Enhances property value while protecting the environment

Chemetco, Inc.
Hartford, IL

EXISTING SANITARY WASTEWATER
TREATMENT SYSTEM



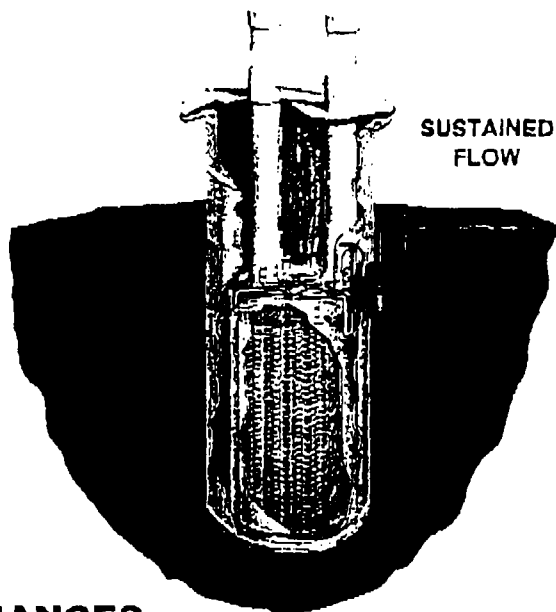
DESIGN
FLOW

ELIMINATES THE NEED FOR SAND, GRAVEL OR SYNTHETIC FILTERS AND PROVIDES TROUBLE-FREE PERFORMANCE...

Modern families with working parents and hectic schedules promote concentrated periods of water usage in short periods of time. In today's home, excessive hydraulic flows are common and often cause problems with conventional sand, gravel and synthetic filters. The unique flow equalizing design of the Bio-Kinetic System insures that all incoming wastewater is properly treated prior to discharge. Clarified liquids enter the Bio-Kinetic System through the filter media and are held in the baffled perimeter settling zone. Liquids exit the perimeter settling zone through two design flow equalization ports. These ports control the flow to all downstream processes and regulate the amount of liquid that can pass to the internal settling chambers. When incoming flow exceeds the hydraulic discharge rate of the equalization ports, it is retained upstream of the Bio-Kinetic System within the three compartments of the Singulair Tank.

FEATURES

- Three positive filtration zones
- Seven settling zones
- Adjustable effluent weir
- Leveling lugs with level
- Adjustable flow deck
- Design flow equalization
- Sustained flow equalization
- Peak flow equalization
- Design flow filter
- Peak flow filter
- Lock-down lugs
- Optional chlorination
- Optional dechlorination



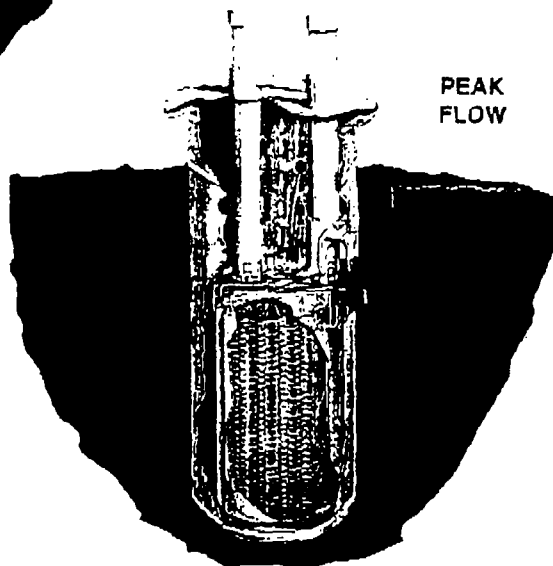
SUSTAINED
FLOW

ADVANTAGES

- Constant flow equalization
- No additional tankage
- Fully automatic operation
- No electrical requirements
- Hi-tech design
- No moving parts
- Serviceable from grade
- Controlled flow rate
- Minimum chlorine usage
- Eliminates operational upsets
- State-of-the-art technology
- Corrosion resistant material

CONSTANT FLOW EQUALIZATION ENHANCES OVERALL SYSTEM PERFORMANCE...

If the incoming wastewater flow increases beyond the discharge rate of the design flow equalization ports, the liquid level will rise to a pair of sustained flow equalization ports. With four flow equalization ports in use, the rate of flow will not exceed the design flow discharge rate. After complete equalization, optional disinfection may be added before all flow follows the multi-directional path to the system outlet. Even during periods of extreme hydraulic or organic overload, effluent quality is maintained. The Bio-Kinetic System has been designed with peak flow filter mesh and peak flow equalization ports held safely in reserve, well above the sustained flow liquid level. Norweco's Bio-Kinetic System combines up-to-the-minute technology with state-of-the-art design to provide today's answer for the protection of tomorrow's environment.



PEAK
FLOW

WATER TREATMENT SYSTEM

PERMANENT PRECAST CONCRETE TANK AND NON-CORROSIVE COMPONENT PARTS...

Each Singlair System is constructed of high quality, non-corrosive materials under rigid quality control conditions. The tank, access risers and covers are reinforced precast concrete manufactured locally by the licensed Norweco distributor. All internal walls and baffles are cast-in-place to insure uniformity and maximum strength. Each aerator's air intake, aspirator shaft, foam deflector, fresh air vent and aspirator are made of stainless steel or special molded plastic. Even the carbon steel aerator mounting brackets and lifting handles have been plated for protection. The Bio-Kinetic System is constructed entirely of molded plastic, stainless steel or rubber component parts that are impervious to the environment.

COMPREHENSIVE HOMEOWNER PROTECTION...

A comprehensive Homeowner's Manual is supplied with each Singlair System. The manual is written in a detailed, yet easily understood manner providing a complete description of system operation and maintenance. To insure that each Singlair System is installed and operating properly, semi-annual service inspections for the first two years of system operation are provided. This initial service program is included in the original purchase price and can be extended for a nominal fee to cover additional periods of time. When you install a Singlair System, you can be sure you have made a wise investment. The best technology available is incorporated into each Singlair Bio-Kinetic System.



ENERGY EFFICIENT AERATOR...

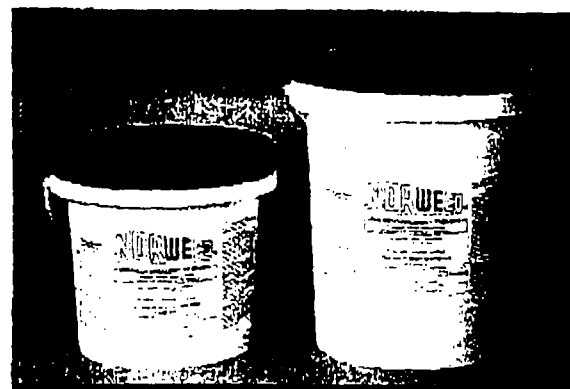
The Singlair Aerator is powered by a 120-volt, single-phase, 60-cycle, fractional horsepower motor. It is the only electrically powered component in the treatment system. The aspirator shaft and tip are designed to be submerged and are manufactured from corrosion resistant stainless steel or special molded plastics. All electrical components, bearings and air intake ports are located well above the normal operating liquid level in the tank. The aerator motor has been designed specifically for use in the Singlair System. It is constructed from the finest available component parts including lifetime lubricated and permanently sealed ball bearings. Each aerator must pass an extensive quality control checklist prior to shipment. Each is individually operated in a specially designed tank simulating in-use conditions. Electrical and mechanical instrumentation is used to confirm manufacturing tolerances and proper operation. Because of these comprehensive design features and stringent quality control procedures, the Singlair Aerator will provide years of trouble-free service.

PREWIRED CONTROLS PERMIT FULLY AUTOMATIC OPERATION...

Each Singlair Aerator is supplied with a prewired electrical control panel to permit fully automatic operation. The control center is contained in a corrosion resistant enclosure for protection of components and wiring. It includes a manually resettable circuit breaker, on/off selector switch, moisture-proof jacket, pilot light, optional audible warning alarm, internal grounding lug control wiring and all necessary electrical connectors. To discourage unauthorized access, an attractive molded plastic cover is securely fastened to the enclosure. The local, distributor's name, address and telephone number are prominently displayed on the panel. All system controls and necessary homeowner information are conveniently located at your fingertips.

OPTIONAL BIO-NEUTRALIZER® DECHLORINATION TABLETS

Formulated and manufactured as an efficient and dependable means to chemically neutralize both free and combined chlorine, these tablets dissolve slowly and evenly, providing consistent reduction or elimination of chlorine residual. They are a reliable, safe and economical method for reduction of residual chlorine if you are located in an area near environmentally sensitive surface waters. Packaged in easily handled and resealable containers, Bio-Neutralizer Tablets are available from your local Norweco Distributor in 25-lb. and 45-lb. polyethylene pails.



OTHER EQUIPMENT FROM NORWECO



MODULAR WASTEWATER TREATMENT PLANTS

For semi-commercial applications — 1,500 to 100,000 GPD. Tanks are precast concrete covered with galvanized metal grating. Equipment is factory assembled and tested. Ideal for small subdivisions, factories, schools, shopping centers, etc.

TRAVALLER WASTEWATER TREATMENT PLANTS

Featuring Norweco's exclusive TRAVALLER sludge return and surface skimmer system. Flexible in design — capable of serving communities of 10,000 people. Automatic sludge collection and return completely eliminate hopper scraping.

LIFT-RAIL WASTEWATER PUMPING STATIONS

Featuring guide rails and telescopic hoist with winch for rapid pump removal and inspection. Available to handle any pumping application — installed and ready to operate in less than a week. Controls are installed at ground level in a weatherproof enclosure.

Originally founded in 1906, Norweco has years of experience in the pollution control field. An impressive list of installations including the Army Corps of Engineers, FHA, Department of Energy, numerous Fortune 500 firms, the Atomic Energy Commission, U.S. Department of Natural Resources and U.S. E.P.A. funded projects demonstrate the field proven acceptability of Norweco's products.

Norweco is fully committed to manufacture only the highest quality products to insure the protection of our environment. Seen regularly as students or instructors, Norweco personnel participate in approved educational and regulatory programs to insure that designs, equipment and manufacturing processes remain on the cutting edge of environmental technology.

Norweco products are sold throughout the United States as well as abroad. The Singlair Bio-Kinetic Wastewater Treatment System is a quality product backed by a local expert, manufactured, sold, installed and serviced with pride.

All Norweco Wastewater Treatment Systems are sold, installed and serviced by factory-trained, Norweco distributors. They are fully trained regarding installation of the product and are able to provide all necessary job coordination to insure a simple, economical installation. They have a complete understanding of the product and its application.

Each system is sold complete including delivery, tank setting, equipment installation, plant start-up and service. Even a series of service and adjustment inspections, pre-scheduled for the first two years of operation, is included in the sale.

"Progress through service since 1906" sums it up nicely. A quality product — serviced by a local expert — has earned Norweco a reputation for excellence.

DISTRIBUTED BY:

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Phone (419) 668-1400

APPLICATION FOR NPDES STORMWATER PERMIT (OUTFALL 004)
AND
APPLICATION FOR JOINT CONSTRUCTION AND OPERATING PERMIT
STORMWATER TREATMENT SYSTEM

CHEMETCO
Route 3 & Oldenburg Road
Hartford, Illinois 62048

ATTACHMENT 5:

Untreated Stormwater\Groundwater Analysis Summary Table
(and Laboratory Analysis Reports)

JULY 1997

CHEMETCO, INC.
Hartford, Illinois

STORMWATER ANALYSIS SUMMARY TABLE

PARAMETER	RESULTS (mg/l)						Avg. CONC. (mg/l)	GENERAL DISCHARGE STD. (mg/l)	
	Max. Outfall 002* (1992-1996)	Cooling Canals ** (Feb.97-July 97)							
Oil and Grease	41.3	3.2	7.0	<1.0			13.12	15.0	
BOD ₅	-	16.7						-	30
COD	-	<20						-	(*)
Total Organic Carbon	-	19						-	(*)
TSS	69	9.5	74				50.8	15.0	
Total Nitrogen (Ammonia as N)	-	9.1	3.3	2.4			4.9	4.0 (Nov - March)	
Total Phosphorus	-	0.33	1.2	0.61			0.71	(*)	
Arsenic	-	0.05		0.07			-	0.25	
Barium	-	0.03		0.04			-	2.0	
Boron	-	13.9	8.6	11.0			11.16	(*)	
Cadmium	-	2.58	2.99	0.1	0.1		1.44	0.15	
Chromium	-	<0.007		<0.007			-	1.0	
Copper	0.69	0.27	0.387	1.31	0.67		0.67	0.5	
Cyanide	-	<0.5		<0.5			-	0.10	
Fluoride	-	263		94			-	15.0	
Iron	4.35	0.03		0.820	2.1	6.2	1.73	2.0	
Lead	0.31	0.37	0.472	0.84	2.62	0.73	0.89	0.2	
Manganese	9.93	0.09		0.148			3.39	1.0	
Mercury	-	0.0008		<0.0002			-	0.0005	
Nickel	16.0	<0.015		<0.015			5.34	1.0	
Phenols	-	<0.1		<0.1			-	0.3	
Silver	-	<0.007		<0.007			-	0.1	
Zinc	3.72	13.6	8.59	0.97	2.59		5.89	1.0	
Total Residual Chlorine	-	<0.1						-	(*)
pH	-	8.20		9.18			8.69	6 - 9	
ORGANICS (NPDES Form 2F: Table 2F-2,F-3, 2F-4)	-	ND							(*)

CHEMETCO, INC.
Hartford, Illinois

STORMWATER ANALYSIS SUMMARY TABLE

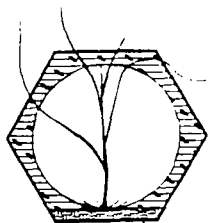
NOTES:

* Maximum data results available for Outfall 002. (-) => less than std.

** Analysis based upon grab samples collected of existing stormwater retention ponds (cooling canals) that presently constitute the closed-loop stormwater management system in-place.

(*)No Standard has been established in 35 Ill. Adm. Code, Subtitle C, Section 304, or standard does not apply to the site.

Those samples exceeding the general use standards as defined in 35 Ill. Adm. Code, Subtitle C, Section 304 are highlighted.



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CSD Environmental Services, Inc.
2220 Yale Boulevard
Springfield, IL 62703

Date Sampled: 02 July 1997
Date Received: 03 July 1997
Date Analyzed: 11 July 1997
Date Reported: 14 July 1997

Project: Chemetco

PAS Project Code: CSD-181

Sample Description:
PAS Sample Number:

E-W Canal N-S Canal
9707023673 9707023674

Conventional & Nonconventional Pollutants Table 2F-2

Parameters	Detection Limit mg/l	Result mg/l	Result mg/l	E.P.A. Method
Aluminum, Total	0.045	0.40	0.20	6010A
Barium, Total	0.010	0.03	0.04	6010A
Boron, Total	0.100	8.6	11.0	6010A
Bromide	1.0	529	506	4110
Chlorine, Total Residual	0.1	<0.1	<0.1	4500 Cl
Cobalt, Total	0.100	<0.100	<0.100	6010A
Fluoride	0.10	263	94	4110
Iron, Total	0.020	2.1	6.2	6010A
Magnesium, Total	0.005	11.6	20.0	6010A
Molybdenum, Total	0.10	1.2	0.7	6010A
Nitrate-Nitrite	0.10	1.1	<0.1	4110
Nitrogen, Total Kjeldahl	1.0	3.3	2.4	4500 -N _{ORG}
Oil & Grease	1.0	7	<1.0	5520
Phosphorus	0.05	1.2	0.61	4500 -P
Sulfate	1.0	3234	3572	4110
Sulfide	0.1	<0.1	<0.1	4500 -S ²⁻
Sulfite	0.1	<0.1	<0.1	4500 - SO ₃ ²⁻
Surfactants	0.025	0.265	0.221	5540C
Tin, Total	0.02	0.03	<0.02	6010A
Titanium, Total	0.01	<0.01	<0.01	6010A

Fecal Coliform (Colonies/100ml)

<1.0

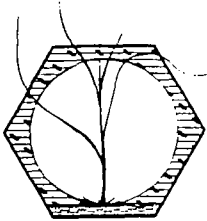
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Stephen R. Johnson
/Stephen R. Johnson Laboratory Director

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Toxic Pollutants & Total Phenols - Table 2F-3

Parameters	Detection Limit mg/l	Result mg/l	Result mg/l	E.P.A. Method
Antimony, Total	0.03	0.07	0.03	6010A
Arsenic, Total	0.05	0.07	<0.05	6010A
Beryllium, Total	0.0003	<0.0003	<0.0003	6010A
Cadmium, Total	0.004	0.10	0.10	6010A
Chromium, Total	0.007	<0.007	<0.007	6010A
Copper, Total	0.006	1.31	0.67	6010A
Lead, Total	0.04	2.62	0.73	6010A
Mercury, Total	0.0002	0.0008	<0.0002	7470
Nickel, Total	0.015	<0.015	<0.015	6010A
Selenium, Total	0.075	0.30	<0.075	6010A
Silver, Total	0.007	<0.007	<0.007	6010A
Thallium, Total	0.04	<0.04	0.07	6010A
Zinc, Total	0.002	2.59	2.59	6010A
Cyanide	0.5	<0.5	<0.5	9010
Phenols	0.1	<0.1	<0.1	9067

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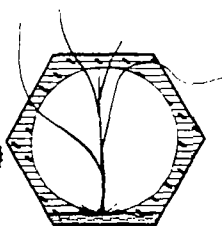


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Volatile Organic Compounds - (Method 8260A) - Table 2F-3

Parameters	Detection Limit ug/l	Result ug/l	Result ug/l	E.P.A. Method
Acrolein	10	<10	<10	8260A
Acrylonitrile	10	<10	<10	8260A
Benzene	5	<5	<5	8260A
Bromoform	5	<5	<5	8260A
Carbon Tetrachloride	5	<5	<5	8260A
Chlorobenzene	5	<5	<5	8260A
Chlorodibromomethane	5	<5	<5	8260A
Chloroethane	5	<5	<5	8260A
2-Chloroethylvinyl Ether	5	<5	<5	8260A
Chloroform	5	<5	<5	8260A
Dichlorobromomethane	5	<5	<5	8260A
1,1-Dichloroethane	5	<5	<5	8260A
1,2-Dichloroethane	5	<5	<5	8260A
1,1-Dichloroethene	5	<5	<5	8260A
1,2-Dichloropropane	5	<5	<5	8260A
1,3-Dichloropropylene	5	<5	<5	8260A
Ethylbenzene	5	<5	<5	8260A
Methyl Bromide	5	<5	<5	8260A
Methyl Chloride	5	<5	<5	8260A
Methylene Chloride	5	<5	<5	8260A
1,1,2,2-Tetrachloroethane	10	<10	<10	8260A
Tetrachloroethylene	5	<5	<5	8260A
Toulene	5	<5	<5	8260A

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Project No.: Chemetco

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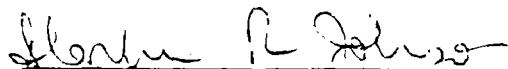
Sample Description:
PAS Sample Number

E-W Canal N-S Canal
9707023673 9707023674

Volatile Organic Compounds - (Method 8260A) - Table 2F-3(Cont.)

<u>Parameters</u>	Detection Limit ug/l	Result ug/l	Result ug/l	E.P.A. Method
1,2-trans-Dichloroethylene	5	<5	<5	8260A
1,1,1-Trichloroethane	5	<5	<5	8260A
1,1,2-Trichloroethane	5	<5	<5	8260A
Trichloroethylene	5	<5	<5	8260A
Vinyl Chloride	10	<10	<10	8260A

<u>Surrogates</u>	Recovery Limit	% Recovery	% Recovery
1,2-Dichloroethane d4	80-120%	93%	93%
4-Bromofluorobenzene	80-120%	93%	94%
Toluene d8	80-120%	99%	99%


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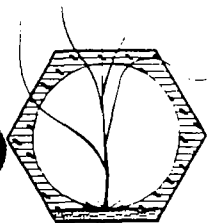


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E-W Canal N-S Canal
9707023673 9707023674

8270 Base/Neutral/Acid Extractable Compounds - Table 2F-3

Analytes	Detection Limit ug/l	Result ug/l	Result ug/l	E.P.A. Method
2-Chlorophenol	10	< 10	< 10	8270B
2,4-Dimethylphenol	10	< 10	< 10	8270B
2,4-Dinitrophenol	50	< 50	< 50	8270B
4,6-Dinitro-O-Cresol	50	< 50	< 50	8270B
2,4-Dinitrophenol	50	< 50	< 50	8270B
2-Nitrophenol	50	< 50	< 50	8270B
4-Nitrophenol	50	< 50	< 50	8270B
p-Chloro-M-Cresol	50	< 50	< 50	8270B
Pentachlorophenol	50	< 50	< 50	8270B
Phenol	10	< 10	< 10	8270B
2,4,5-Trichlorophenol	10	< 10	< 10	8270B
Acenaphthene	10	< 10	< 10	8270B
Acenaphthylene	10	< 10	< 10	8270B
Anthracene	10	< 10	< 10	8270B
Benzidine	10	< 10	< 10	8270B
Benzo (a) Anthracene	10	< 10	< 10	8270B
Benzo (a) Pyrene	10	< 10	< 10	8270B
3,4-Benzofluoranthene	10	< 10	< 10	8270B
Benzo (g,h,i) Perylene	10	< 10	< 10	8270B
Benzo (k) Fluoranthene	10	< 10	< 10	8270B
Bis (2-chloroethoxy) Methane	10	< 10	< 10	8270B
Bis (2-chloroethyl) Ether	10	< 10	< 10	8270B
Bis (2-chloroisopropyl) Ether	10	< 10	< 10	8270B
Bis (2-ethylhexyl) Phthalate	10	< 10	< 10	8270B
4-Bromophenyl Phenyl Ether	10	< 10	< 10	8270B

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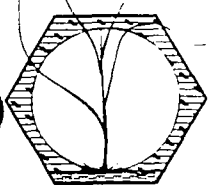


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Project No.: Chemetco

PAS Project Code: CSD-181

Sample Description:

E-W Canal

N-S Canal

PAS Sample Number:

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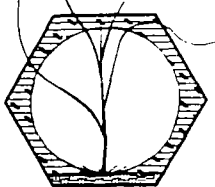
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8270 Base/Neutral/Acid Extractable Compounds - Table 2F-3(Cont.)

Parameters	Detection Limit ug/l	Result ug/l	Result ug/l	E.P.A. Method
Butyl Benzyl Phthalate	10	< 10	< 10	8270B
2-Chloronaphthalene	10	< 10	< 10	8270B
4-Chlorophenyl Phenyl Ether	10	< 10	< 10	8270B
Chrysene	10	< 10	< 10	8270B
Dibenzo (a,h) Anthracene	10	< 10	< 10	8270B
1,2-Dichlorobenzene	10	< 10	< 10	8270B
1,3-Dichlorobenzene	10	< 10	< 10	8270B
1,4-Dichlorobenzene	10	< 10	< 10	8270B
3,3'-Dichlorobenzidine	20	< 20	< 20	8270B
Diethyl Phthalate	10	< 10	< 10	8270B
Dimethyl Phthalate	10	< 10	< 10	8270B
Di-N-Butylphthalate	10	< 10	< 10	8270B
2,4-Dinitrotoluene	10	< 10	< 10	8270B
2,6-Dinitrotoluene	10	< 10	< 10	8270B
Di-N-Octyl Phthalate	10	< 10	< 10	8270B
1,2-Diphenylhydrazine	10	< 10	< 10	8270B
Fluoranthene	10	< 10	< 10	8270B
Fluorene	10	< 10	< 10	8270B
Hexachlorobenzene	10	< 10	< 10	8270B
Hexachlorobutadiene	10	< 10	< 10	8270B
Hexachloroethane	10	< 10	< 10	8270B
Indeno (1,2,3-c,d) Pyrene	10	< 10	< 10	8270B
Isophorone	10	< 10	< 10	8270B
Naphthalene	10	< 10	< 10	8270B
Nitrobenzene	10	< 10	< 10	8270B
N-Nitrosodimethylamine	10	< 10	< 10	8270B
N-Nitrosodi-N-propylamine	10	< 10	< 10	8270B
N-Nitrosodiphenylamine	10	< 10	< 10	8270B

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Project No.: Chemetco

PAS Project Code: CSD-181

Sample Description:

E-W Canal

N-S Canal

PAS Sample Number:

9707023673

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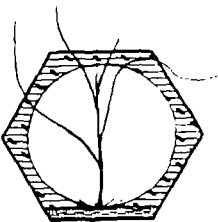
8270 Base/Neutral/Acid Extractable Compounds - Table 2F-3(Cont.)

<u>Parameters</u>	Detection Limit ug/l	Result ug/l	Result ug/l	E.P.A. Method
Phenanthrene	10	< 10	< 10	8270B
Pyrene	10	< 10	< 10	8270B
1,2,4-Trichlorobenzene	10	< 10	< 10	8270B

<u>Surrogates</u>	Recovery Limit	% Recovery	% Recovery
Nitrobenzene d5	35-114%	56%	65%
Terphenyl d14	33-141%	80%	107%
2-Fluorobiphenyl	43-116%	87%	77%
Phenol d6	10-94%	69%	27%
2-Fluorophenol	21-100%	90%	54%
2,4,6-Tribromophenol	10-123%	104%	107%

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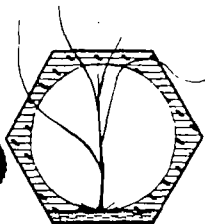
Sample Description:
PAS Sample Number:

E-W Canal N-S Canal
9707033673 9707033674

Pesticides - Table 2F-3

Parameters	Detection Limit mg/l	Result mg/l	Result mg/l	E.P.A. Method
Aldrin	0.004	<0.004	<0.004	8081
alpha-BHC	0.003	<0.003	<0.003	8081
beta-BHC	0.006	<0.006	<0.006	8081
delta-BHC	0.009	<0.009	<0.009	8081
gamma-BHC (Lindane)	0.004	<0.004	<0.004	8081
Chlordane	0.014	<0.014	<0.014	8081
4,4'-DDD	0.011	<0.011	<0.011	8081
4,4'-DDE	0.004	<0.004	<0.004	8081
4,4'-DDT	0.012	<0.012	<0.012	8081
Dieldrin	0.002	<0.002	<0.002	8081
Alpha-Endosulfan	0.014	<0.014	<0.014	8081
Beta-Endosulfan	0.004	<0.004	<0.004	8081
Endosulfan Sulfate	0.066	<0.066	<0.066	8081
Endrin	0.006	<0.006	<0.006	8081
Endrin Aldehyde	0.023	<0.023	<0.023	8081
Heptachlor	0.003	<0.003	<0.003	8081
Heptachlor Epoxide	0.083	<0.083	<0.083	8081
Toxaphene	0.240	<0.240	<0.240	8081
Aroclor 1016	0.050	<0.050	<0.050	8081
Aroclor 1221	0.065	<0.065	<0.065	8081
Aroclor 1232	0.065	<0.065	<0.065	8081
Aroclor 1242	0.065	<0.065	<0.065	8081
Aroclor 1248	0.090	<0.090	<0.090	8081

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Project: Chemecto

PAS Project Code: CSD-181

Sample Description:

E-W Canal

N-S Canal

PAS Sample Number:

9707033673

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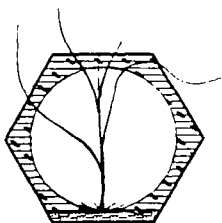
Pesticides - Table 2F-3 (Cont.)

Analyte	Detection Limit mg/l	Result mg/l	Result mg/l	E.P.A. Method
Aroclor 1254	0.10	<0.10	<0.10	8081
Aroclor 1260	0.10	<0.10	<0.10	8081
Aroclor 1262	0.10	<0.10	<0.10	8081
Aroclor 1268	0.10	<0.10	<0.10	8081

Surrogates	Recovery Limit	% Recovery	% Recovery
2,4,5,6-Tetrachloro-m-xylene	35-114%	75%	
Dibutyl Chlorendate	35-114%	91%	

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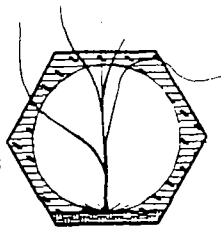
E-W Canal N-S Canal
9707033673 9707033674

Hazardous Substances - Table 2F-4

Parameters	Detection Limit mg/l	Result mg/l	Result mg/l	E.P.A. Method
Acetaldehyde	0.110	<0.110	<0.110	8315
Allyl alcohol	---	ND	ND	8260A
Allyl chloride	---	ND	ND	8260A
Aniline	0.010	<0.010	<0.010	8270B
Benzyl chloride	0.005	<0.005	<0.005	8121
Butylamine	0.010	<0.010	<0.010	8260A
Carbaryl	0.002	<0.002	<0.002	8318
Carbofuran	0.002	<0.002	<0.002	8318
Carbon disulfide	0.005	<0.005	<0.005	8260A
Chloropyrifos	0.001	<0.001	<0.001	8321
Coumaphos	0.001	<0.001	<0.001	8321
Cresol	0.001	<0.001	<0.001	8270B
Crotonaldehyde	0.006	<0.006	<0.006	8315
Cyclohexane	0.006	<0.006	<0.006	8315
2,4-D	0.029	<0.029	<0.029	8321
Diazinon	0.001	<0.001	<0.001	8321
Dicamba	0.054	<0.054	<0.054	8321
Dichlobenil	---	ND	ND	8081
Dichlone	---	ND	ND	8270
2,2-Dichloropropionic acid	---	ND	ND	8270
Dichlorvos	0.001	<0.001	<0.001	8321
Diethyl amine	---	ND	ND	8260A
Dimethyl amine	---	ND	ND	8260A

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Prairie Analytical Systems, Inc.

An Environmental and Agricultural Testing Laboratory



Page 11 of 12

Project: Chemetco

PAS Project Code: CSD-181

Sample Description:

E-W Canal

N-S Canal

PAS Sample Number:

9707033673

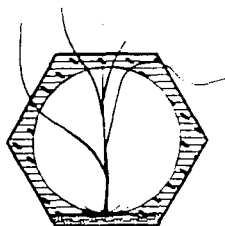
9707033674

Hazardous Substances - Table 2F-4 (Cont.)

Analyte	Detection Limit mg/l	Result mg/l	Result mg/l	E.P.A. Method
Dinitrobenzene	0.010	<0.010	<0.010	8090
Diquat	---	ND	ND	549.1
Disulfoton	0.001	<0.001	<0.001	8321
Diuron	0.001	<0.001	<0.001	8270B
Epichlorohydrin	0.001	<0.001	<0.001	8260A
Ethion	0.001	<0.001	<0.001	8270B
Ethylene diamine	0.001	<0.001	<0.001	8260A
Ethylene dibromide	0.001	<0.001	<0.001	8260A
Formaldehyde	0.001	<0.001	<0.001	8315
Furfural	0.001	<0.001	<0.001	8270B
Guthion	0.001	<0.001	<0.001	8270B
Isoprene	0.001	<0.001	<0.001	8270B
Isopropanolamine	---	ND	ND	8270B
Kelthane	---	ND	ND	8270B
Kepone	---	ND	ND	8270B
Malathion	0.001	<0.001	<0.001	8270B
Marcaptodimethur	---	ND	ND	8270B
Methoxychlor	0.057	<0.057	<0.057	8270B
Methyl mercaptan	0.001	<0.001	<0.001	8270B
Methyl methacrylate	0.001	<0.001	<0.001	8260A
Methyl parathion	0.001	<0.001	<0.001	8321
Mevinphos	0.001	<0.001	<0.001	8321
Mexacarbate	---	ND	ND	8270B
Monomethyl amine	---	ND	ND	8270B
Naled	0.001	<0.001	<0.001	8321
Nitrotoluene	0.001	<0.001	<0.001	8321
Parathion	0.001	<0.001	<0.001	8270B
Phenolsulfonate	---	ND	ND	8270B
Propargite	---	ND	ND	8270B

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Prairie Analytical Systems, Inc.

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Page 12 of 12

Project: Chemetco

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Sample Description:

E-W Canal

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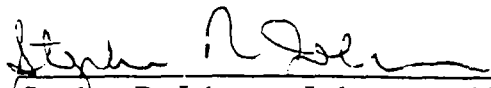
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Hazardous Substances - Table 2F-4 (Cont.)

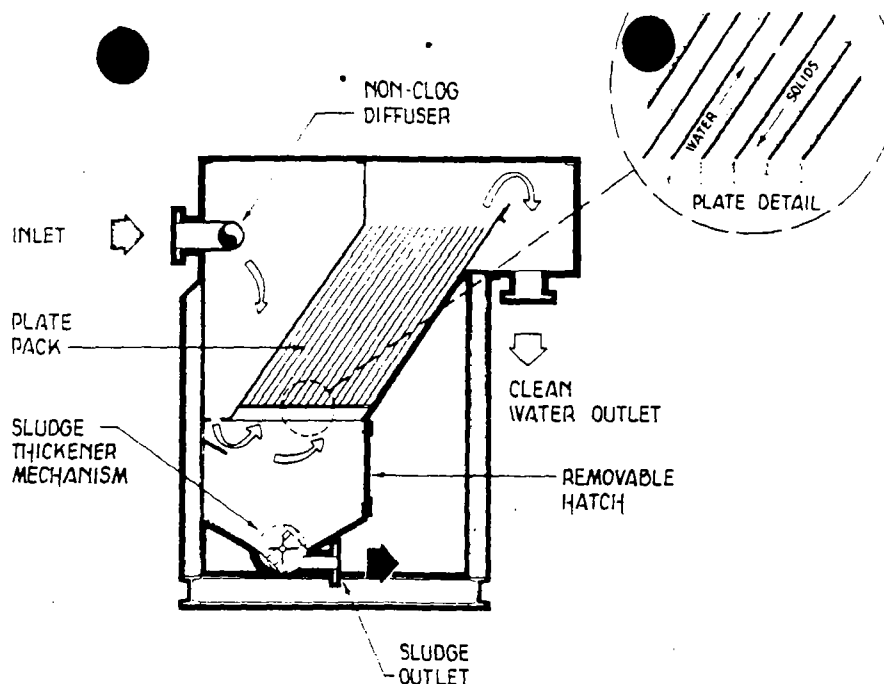
Analyte	Detection Limit mg/l	Result mg/l	Result mg/l	E.P.A. Method
Pyrethrins	---	ND	ND	8081
Quinoline	---	ND	ND	8270B
Resorcinol	---	ND	ND	8270B
Strontium	0.0005	<0.0005	<0.0005	6010A
Styrene	0.005	<0.005	<0.005	8260A
2,4,5-T	0.034	<0.034	<0.034	8321
2,4,5-TP	0.034	<0.034	<0.034	8321
Trichlorofon	---	ND	ND	8321
Triethylamine	---	ND	ND	8270B
Uranium	0.01	<0.01	<0.01	6010A
Vanadium	0.008	<0.008	<0.008	6010A
Vinyl acetate	0.005	<0.005	<0.005	8260A
Xylene	0.005	<0.005	<0.005	8260A
Xylenol	0.005	<0.005	<0.005	8260A
Zirconium	0.01	<0.01	<0.01	6010A

ND = Not Detected on the Total Ion Chromatogram


Stephen R. Johnson, Laboratory Director

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or loss of head which results in even flow distribution. At the same time they are present in sufficient size and number so as not to surcharge the influent.

Plate Packs

The IPC plate packs consist of sets of smooth surfaced polypropylene plates assembled into packs. Construction utilizes stainless steel rods and PVC spacers. The plates are locked in at the proper angle and spacing by a unique design that provides both strength and rigidity. The plate pack is easily cleaned in place and can be removed if necessary. Plate packs are equipped with lifting eyes.

NOTE: Plate packs are available in other than standard sizes for installation in other manufacturers' clarifiers.

Sludge Chamber

The sludge chamber receives the settled sludge and collects it in a pitched bottom compartment. A sludge thickening mechanism is located in the bottom of the sludge compartment. This slowly rotating rake type device is designed to thicken the sludge and convey it to the discharge end of the clarifier. The slow rotation of the rakes allows the sludge to thicken by releasing entrained water. This thicker sludge facilitates dewatering operations. The sludge mechanism is driven through chain and sprockets by a gearmotor. Access hatches are provided in the side of the sludge chamber.

Clean Water Chamber

As the clarified water passes upward through the plates it enters the clean water outlet chamber by cascading over an adjustable weir. The weir runs the full length of the clarifier to further insure even flow distribution throughout the plate pack.

MATERIALS OF CONSTRUCTION

Materials of construction include 1/4" thick ASTM A36 structural quality carbon steel, 304 and 316 stainless steel. The standard plate material is stress relieved polypropylene which can be used in applications requiring continuous exposure to temperature up to 200° F. The surface hardness and the chemical resistant properties of the polypropylene are excellent for most applications. The plates can also be supplied in other materials. PVC spacers and stainless steel rods are used in the plate pack assembly. All steel tank welds are Magnaflux, spot check tested in accordance with military specifications.

COATINGS

All carbon steel surfaces are blast cleaned and epoxy coated. Interiors are coated with Coal Tar Epoxy and exteriors are coated with High Build Epoxy. Special coatings and rubber linings are available.

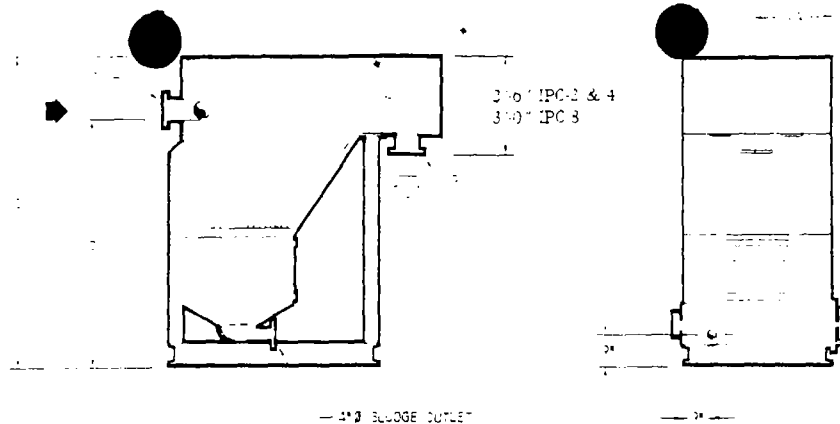
AVAILABLE OPTIONS

- Oil Skimming/Flocculation Tanks
- Polishing Filters
- Pre and Post pH Control
- Sludge Pump Out Systems
- Solids Contact Recycle
- Solids Effluent Monitor
- Additional Sludge Capacity
- Design Flexibility to Satisfy Your Application

APPLICATIONS

- Air Scrubbers
- Automotive
- Chemical Plants
- Electrical Industries
- Fabricated Metal Plants
- Glass Factories
- Metal Platers
- Metal Hydroxides
- Military Bases
- Microprocessors
- Pulp & Paper Mills
- Railroad Yards
- Steel Mills
- Starch Separation
- Stone, Glass & Clay Ind.
- Textile Mills
- Utility Companies
- Wash Operations

For further information contact Great Lakes Environmental, Inc., or our local representative. We will be glad to assist you in selecting a properly sized unit for your application.



DIMENSIONS, WEIGHTS & CAPACITIES

MODEL	A	B	C	D	P	NO. OF PACKS	EMPTY WT.	OPER. WT.
IPC-2- 55	2'	6'-4"	6'-6"	5'-0"	4"	1	1400	4300
IPC-2-110	4'	6'-4"	6'-6"	4'-11"	6"	1	2100	7900
IPC-2-165	6'	6'-4"	6'-6"	4'-11"	6"	1	2700	11400
IPC-2-220	8'	6'-4"	6'-6"	4'-10"	8"	2	3500	15000
IPC-4-110	2'	7'-4"	8'-0"	6'-3"	6"	1	2280	6400
IPC-4-220	4'	7'-4"	8'-0"	6'-2"	8"	1	2580	11200
IPC-4-330	6'	7'-4"	8'-0"	6'-2"	8"	2	3280	16000
IPC-4-440	8'	7'-4"	8'-0"	6'-1"	10"	2	4200	20800
IPC-4-550	10'	7'-4"	8'-0"	6'-1"	10"	3	5100	25700
IPC-4-660	12'	7'-4"	8'-0"	6'-1"	10"	3	6200	30500
IPC-4-770	14'	7'-4"	8'-0"	6'-0"	12"	4	7000	35300
IPC-4-880	16'	7'-4"	8'-0"	6'-0"	12"	4	7800	40200
IPC-4-990	18'	7'-4"	8'-0"	6'-0"	12"	5	8300	45000
IPC-4-1100	20'	7'-4"	8'-0"	6'-1"	(2) 10"	5	9100	49800
IPC-8-660	6'	9'-6"	11'-6"	9'-7"	10"	2	5700	28900
IPC-8-880	8'	9'-6"	11'-6"	9'-6"	12"	2	7100	38000
IPC-8-1100	10'	9'-6"	11'-6"	9'-6"	12"	4	8600	47300
IPC-8-1320	12'	9'-6"	11'-6"	9'-7"	(2) 10"	4	9800	56300
IPC-8-1540	14'	9'-6"	11'-6"	9'-6"	(2) 12"	4	11100	65300
IPC-8-1760	16'	9'-6"	11'-6"	9'-6"	(2) 12"	4	12900	74800
IPC-8-1980	18'	9'-6"	11'-6"	9'-6"	(3) 12"	5	14300	83900
IPC-8-2200	20'	9'-6"	11'-6"	9'-6"	(3) 12"	5	15500	92900

Model No. represents a size, length and efficiency setting and/or

Flow rates are as designed for said settings but should not exceed 100 GPM per sq. ft. of setting area.

Influent & effluent velocities are sized for 100 GPM per sq. ft. of setting area. See application manual for full details.

Dimensions and capacities are for reference only and subject to change.

GREAT LAKES
ENVIRONMENTAL

A WATERLINK COMPANY

315 E. Drew Ave. Addison, IL 60101 • 630-643-8444 • FAX: 630-643-7769
WWW.GLE.COM • GLE@GLE.COM

Tertiary Polishing Filter Model TPF



- Skid assembled
- Low cost installation
- Separate backwash water source is not required
- Automatic

PERFORMANCE

The Model TPF Tertiary Polishing Filter is a multi-layered media filter to remove 90% or better of all suspended solids. Selected grades of media are installed to achieve solids entrainment and/or surface filtration to produce clean water for discharge or reuse. Media selection can be tailored for removal of 5 to 20 micron sized particles.

OPERATION

Multiple filter cells are mounted on a heavy-duty skid with all cells installed, plumbed and wired. The filtration process is automatic with waste water being pumped from a reservoir through all the filter cells in parallel. Captured solids are backwashed, one cell at a time per operator initiation, differential pressure or on a timed basis.

Raw waste water is used for backwash. Waste water is filtered through two of the cells and diverted to backwash the remaining cell. All cells are backwashed in sequence. The filtration process is not stopped during the backwash cycle. A separate backwash water reservoir is not needed.

APPLICATIONS

- Cooling water
- Clarifier overflow
- DAF effluent
- Iron precipitate
- Pre-carbon polish

FEATURES

- Corrosion resistant fiberglass
- PVC piping
- Single skid assembly
- Automatic operation
- PLC controlled (option)
- Flow indicator
- Backwash flow control
- Differential pressure switch

AUTOMATIC
VALVES

AUTOMATIC
CONTROLS

OPEN

FLOW
CONTROL
VALVE

BW

E

CELL 1

CELL 2

CELL 3

B

C

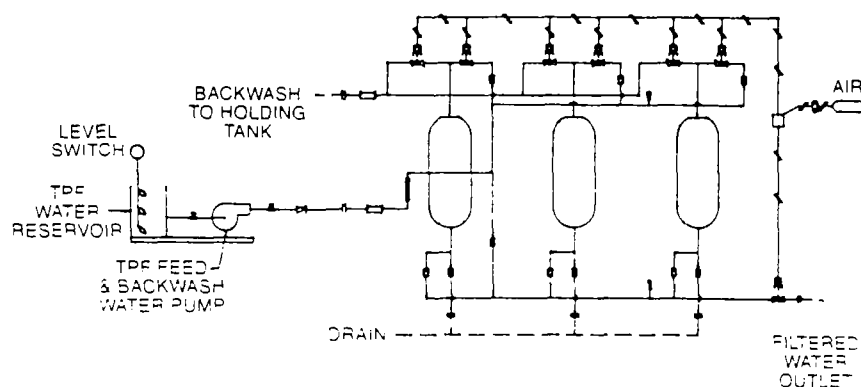
DIMENSIONS WEIGHTS & CAPACITIES

MODEL NUMBER	FLOW G.P.M.	SURFACE AREA (SQ. FT.)	INFLUENT (I) EFFLUENT (E) BACKWASH (BW) NOZZLE DIA.	OVERALL HEIGHT (A)	OVERALL LENGTH (B)	OVERALL WIDTH (C)	SHIPPING WEIGHT INCLUDING MEDIA (LBS.)	OPERATING WEIGHT (LBS.)
TPF-14-3	16	3.2	1.0"	7'-0"	9'-4"	3'-0"	2.865	3.760
TPF-16-3	20	4.2	1.5"	7'-0"	9'-4"	3'-0"	3.375	4.575
TPF-21-3	35	7.2	1.5"	7'-0"	9'-4"	3'-0"	4.200	6.260
TPF-24-3	50	9.4	1.5"	7'-11"	11'-4"	3'-1"	5.085	8.080
TPF-30-3	75	14.7	2.0"	8'-0"	11'-4"	3'-7"	6.570	11.440
TPF-36-3	105	21.2	2.0"	8'-0"	12'-9"	4'-3"	8.505	15.245
TPF-42-3	150	28.9	2.5"	8'-4"	13'-6"	5'-0"	10.200	18.720
TPF-48-3	200	37.7	3.0"	8'-7"	14'-0"	5'-6"	12.750	21.270
TPF-48-4	265	50.2	4.0"	8'-7"	18'-10"	5'-6"	16.300	31.750

Model Number indicates cell diameter - # of cells.

Dimensions are approximate and are not to be used for construction.

TYPICAL ARRANGEMENT



Great Lakes Environmental, Inc. manufactures complimentary equipment to provide a complete, integrated industrial, waste water ground water treatment system.

Inclined Plate Clarifier
Dissolved Air Flotation
Sludge Dewatering
Chemical Treatment
Instrumentation, Controls, PLC
Carbon Absorption
Oil Absorption
Oil-Water Separators

GREAT LAKES
ENVIRONMENTAL

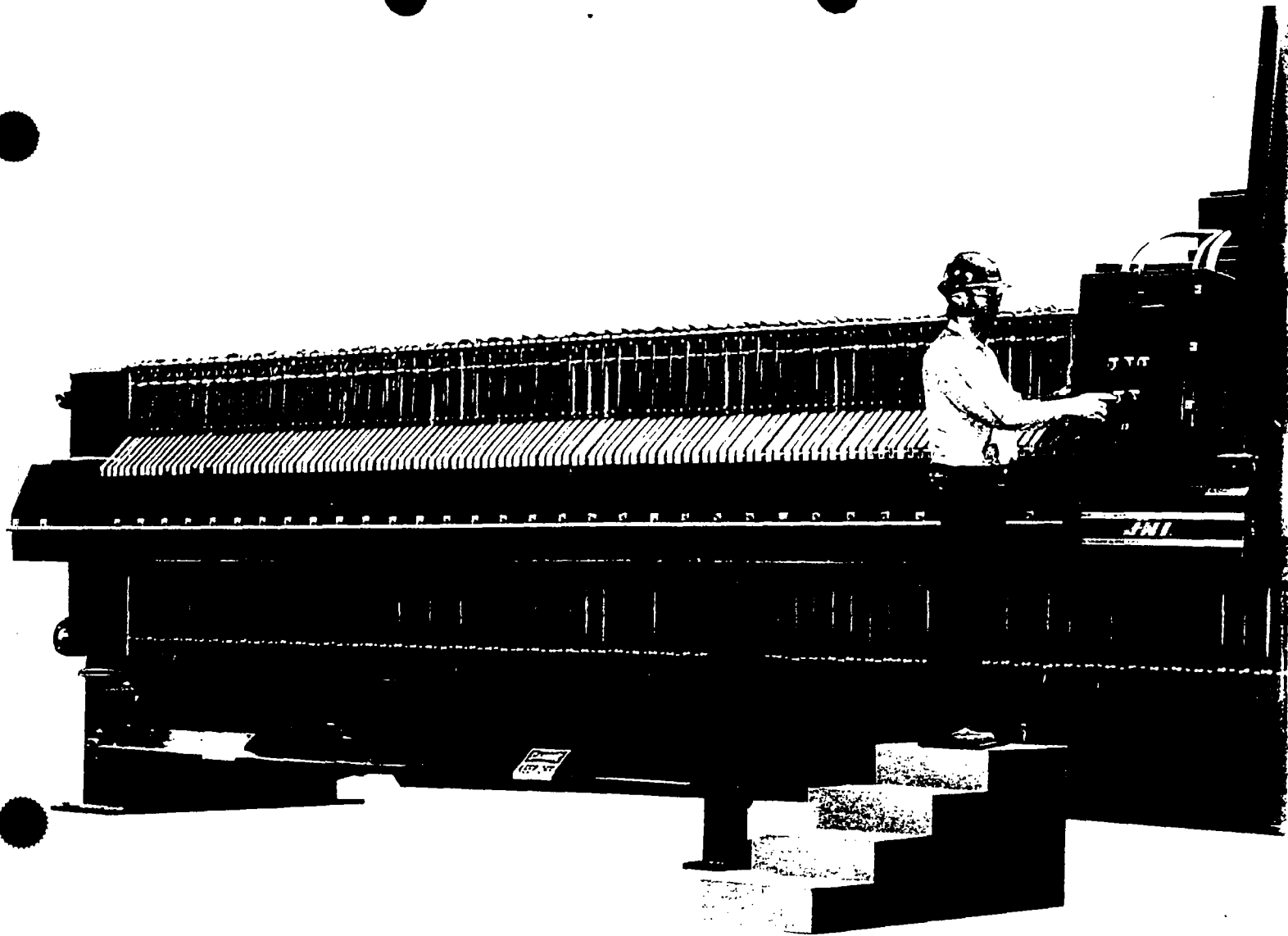
A WATERLINK COMPANY

315 S. Stewart Addison, IL 60101 • (630) 543-9444 • FAX (630) 543-1169
http://www.gle.com • gtricks1@aol.com

FILTER PRESS

SOLUTIONS

BY JWI[®]



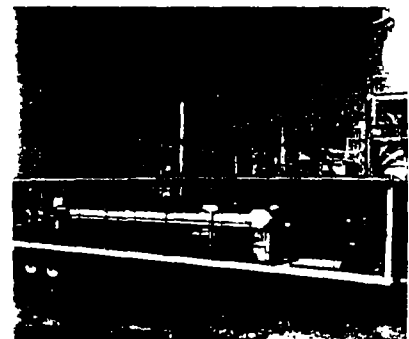
JWI's filter press called the J-Press is among the most widely used liquid solids filtration and separation device obtainable. It is a very cost effective way of producing high solids filter cake, along with an extremely high degree of clarity in the liquid effluent. All units are easy to operate and maintain with minimal operator attendance.

There is more to a J-Press than being the finest quality filter press manufactured for a wide range of applications, and that is the company itself. At JWI,

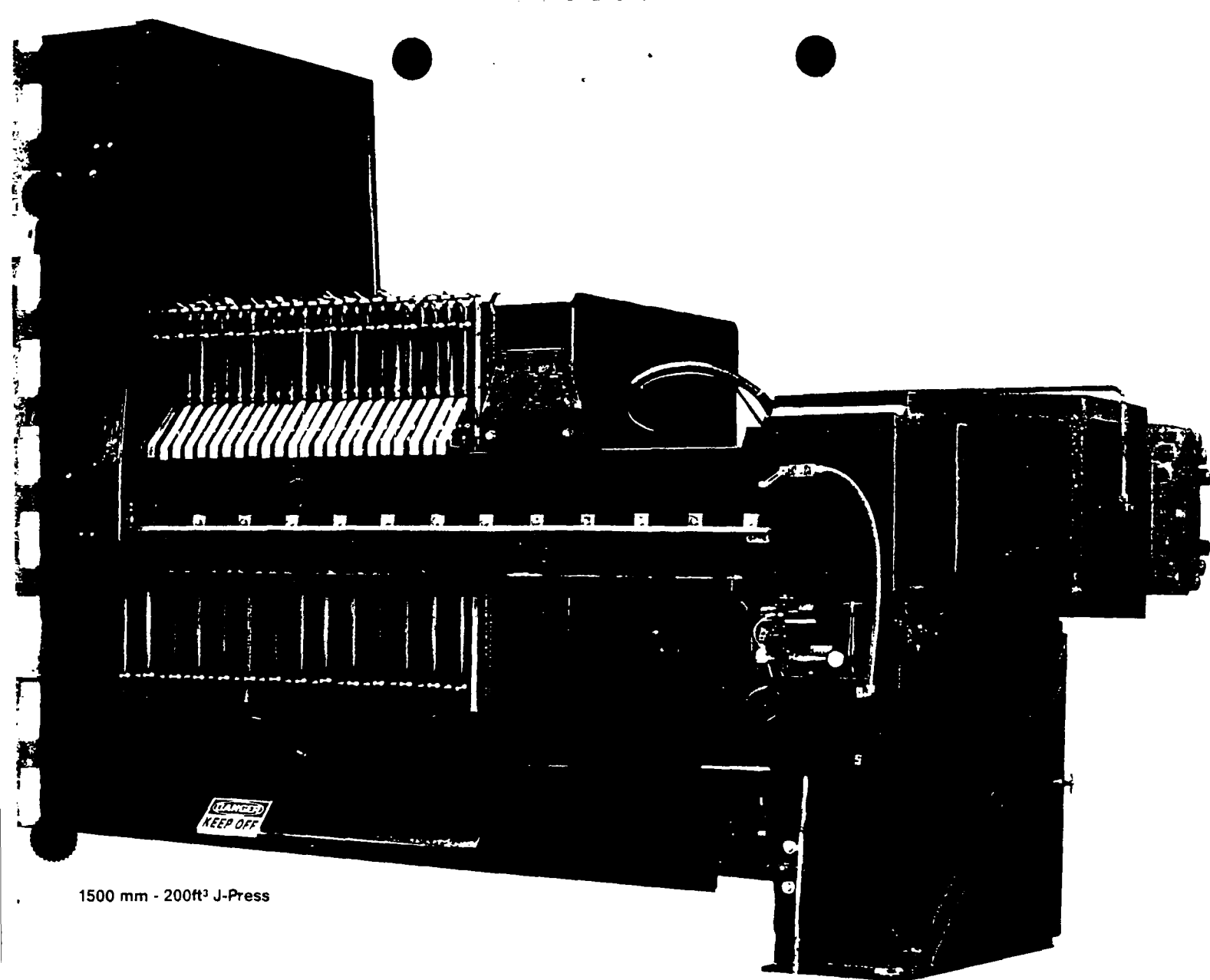
our customers depend upon us to make the difference in the quality of their process. We start by evaluating your material to determine which specific filtration process or pretreatment will be the most effective in generating a slurry for liquid solid separation.

Then we determine the proper size and type of J-Press, plate style, filter cloth, operating pressure, and process time. Even after installation, JWI technical representatives continue to work with you to readily adapt your J-Press for

process or application changes. We also offer a continuing, comprehensive preventative maintenance package to assure long-term, trouble-free operation.



100ft³ mobile dewatering unit.



1500 mm - 200ft³ J-Press

The JWI J-Press is highly versatile and adaptable to a long list of processes and applications, some of which include:

- Ceramics
- Clarification of acids, solvents and process solutions
- Dewatering hazardous waste
- Dewatering of industrial sludges
- Food and Beverage processing and wastewater treatment
- Industrial laundry wastewater



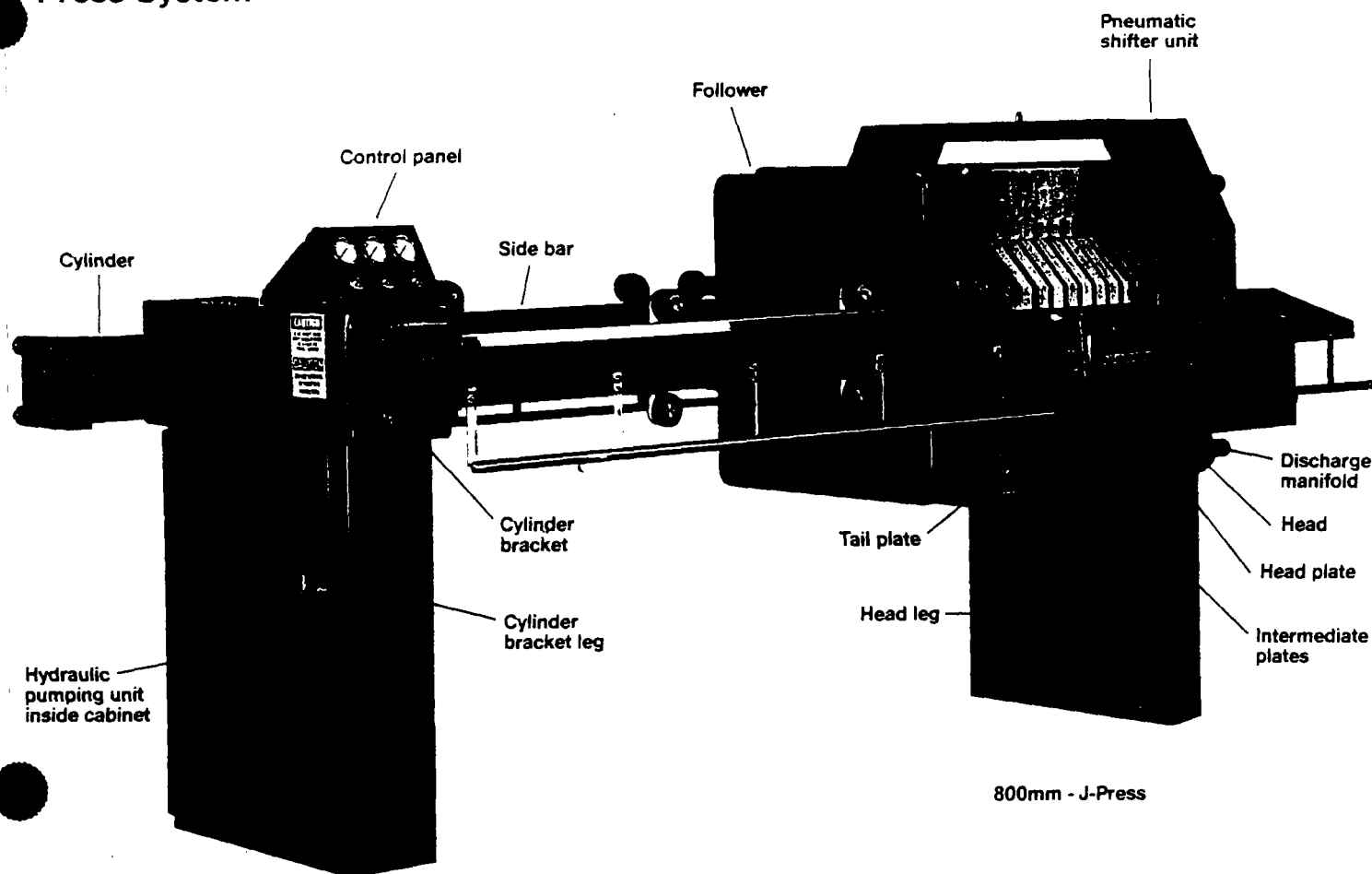
High dry solids content filter cake.

- Lumber treatment plants
- Mining and reclamation of precious metals
- Municipal water and wastewater treatment



- Oil refineries, storage terminals and petrochemical plants
- Oil fields
- Power plants
- Processing of pharmaceutical and chemical products
- Processing of pigments and dyestuffs
- Reduction of metal finishing waste

J-Press System



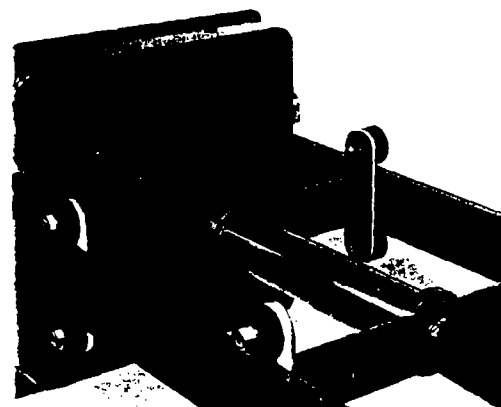
800mm - J-Press

Whether it is a large 1500mm diaphragm, or a small 250mm portable filter press, the JWI J-Press is a fully contained unit that is as easy and safe to operate as it is to adapt to different processes. The filtration process is essentially one of separating suspended solids from a pretreated mixture of liquids and solids called slurry.

A standard J-Press consists of a ruggedly built fabricated steel frame, a series of durable filter plates, filter cloths, usually of woven polypropylene or other material and a pneumatically actuated hydraulic closing mechanism.

Precision alignment and machining of the structural components provides for equal distribution of all pressures and stresses generated during operation.

While JWI technical representatives will recommend the proper J-Press for your specific needs, there are a number of important options available. For example: semi- or automatic plate shifters, automatic press control etc. Also, your J-Press is expandable to handle additional capacity requirements in the future. The standard J-Press system is powered exclusively by compressed air for low energy consumption and safe prevention of electrical sparking in potentially explosive environments.



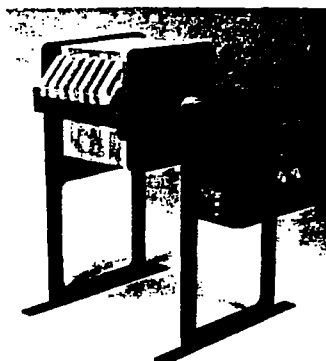
Distance piece

JWI offers a 250mm, .15 ft³ (2.8 L) portable, pilot filter press for field testing purposes. These units include a double diaphragm feed pump, interconnecting piping and air blowdown manifold, all mounted on a skid with casters. Tests can be performed to produce different cake thicknesses, utilizing a variety of filter cloth types and feed pressures. When testing is completed a complete report is provided that shows what a J-Press can accomplish for you.

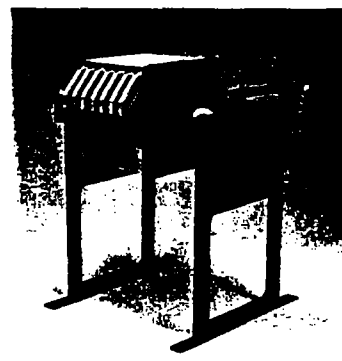
A J-Press is simple to operate from a readily accessible control panel containing all switches and gauges for checking the air and hydraulic pressure. Essentially the J-Press is made ready for operation by activating the air supply to "on" and the selector switch to "close". The hydraulic pump is turned "on" which clamps the plates tightly together. Starting the feed pump begins the cycle by forcing the slurry into the feed inlet for even dispersion of material to each chamber. This slurry, which is under increasing pressure, deposits and builds up particles on the surface of the filter cloth. The filtrate passes through this build-up of particles and the filter cloth and is channeled to discharge ports. When the chambers are filled with solids and the clear filtrate flow becomes minimal the feed pump turns off. The J-Press is now ready for opening and plate shifting in order to separate the dried filter cake from the chamber recesses.



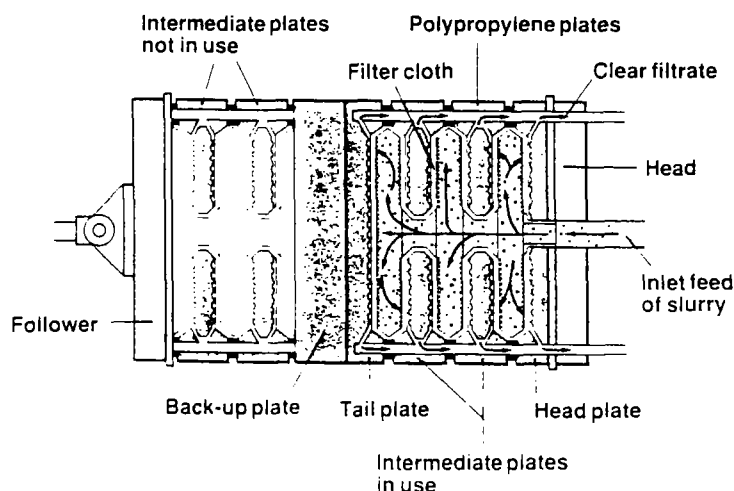
Portable pilot filter J-Press for field or lab testing.



470mm - J-Press, Semiautomatic closure



470mm - J-Press, Manual closure



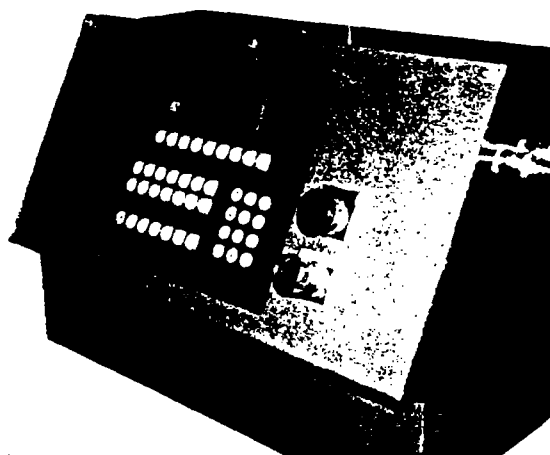
Cross section of J-Press chamber area during fill cycle.

Flexibility and adaptability for applications, processes and capacity are the underlying values resulting from the many standard and optional features of today's J-Press.

JWI has the in-house expertise to design and manufacture filter press control systems to comply with a full range of customer requirements. A filter press control system can be as simple as a manually operated air controlled logic system, or a highly sophisticated, computerized system capable of complete automation including monitoring and operator interface.

- The JWI APCS is a technologically advanced, automatic filter press feed control system. It consists of an enclosure that is NEMA 4 and U.L. labeled and is standard on all new equipment.
- Four timers, which control the operating pressure stages from 25 PSI to 100 PSI are mounted on the enclosure door for easy access and setting. The control voltage is 24 vdc, which allows incoming voltages of 120 vac to 230 vac 50/60 HZ permitting worldwide use of the system. The four timed stages of the APCS system are stepped up by an air flow switch, mounted on the pump exhaust. This activates each time the sludge pump strokes. The control system advances to the next stage when the time between pump strokes equals the timer settings for that stage, rather than to a predetermined, stepped time sequence. This innovation means that the press can adjust automatically for fluctuations in solids content of the sludge and air pressure. The result is consistently high cake solids, a shorter cycle time for more cycles per day and reduced operator attendance time.

J-Press Features and Benefits

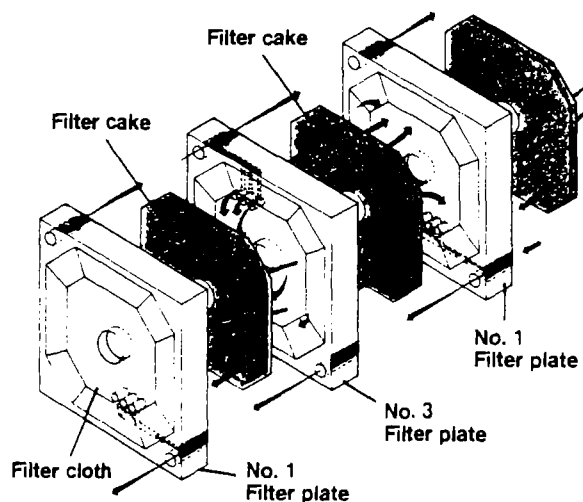


J-Press control panels are simple to learn and make operations easy to manage.

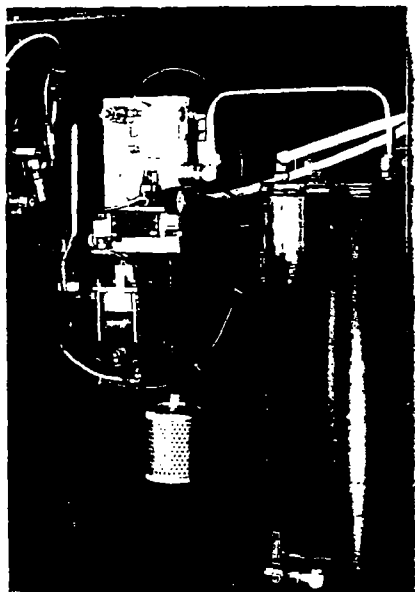


Standard control panel

- Complete Programmable Logic Control (PLC) capability available in a stand-alone unit, provides for automatic sequencing of all J-Press operating functions.
- Lightweight polypropylene plates are standard on most J-Presses. They are generally accepted by the industry as the worldwide material of choice for most applications because they exhibit good chemical resistance, and provide long service life under a broad range of temperatures and pressures.



Air blowdown manifold facilitates excess water removal, dries and loosens filter cake.



Hydraulic pump assembly.



Air blowdown manifold

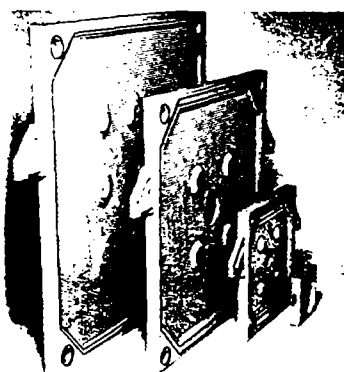


Laboratory testing

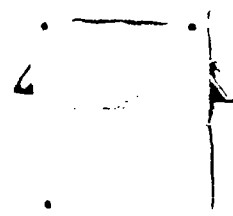
- JWI incorporates Integrated Hydraulic Circuits Technology in its Hydraulic Air Manifold Module. It is a self-contained, lightweight, machined aluminum, ported block. This design, with its straight threaded cartridge type valves, minimizes leakage and reduces leak points by approximately 75%. The packaging of this system makes it easier to maintain or replace, and is field retrofitable. The hydraulic pump and pneumatic components are fully enclosed in a steel cabinet for protection from contamination and accidental damage. The hydraulic pump closes the J-Press, eliminating hand cranking or pumping. The hydraulic system automatically compensates for varying temperatures and pressures that can expand or contract the polypropylene filter plate stack.
- The air blowdown manifold consists of piping and valves which connect the four corner filtrate discharge ports with a common discharge pipe. The components may be constructed of stainless steel, PVC, CPVC, or other materials. The air blowdown process aids in cake release, improves cake dryness, and drains any remaining liquid in the system.
- JWI's completely equipped lab provides a full range of test capabilities for all types of slurry. We can develop the optimum feed pressure/time/ramp program for each customer's automatic pump control requirements.
- For food or pharmaceutical applications, all J-Press components can be constructed of stainless steel.
- The J-Press is available in a complete range of sizes from 250mm through large 1500mm plate sizes (see chart page 12 & 13). Capabilities up to 350 cubic feet can be obtained. Units can be constructed to meet future needs by using an expansion piece that permits insertion of additional filter plates. In the event that a smaller than normal capacity is called for, a back-up plate may be inserted at the proper interval between existing plates.
- A JWI plate shifter is available in various configurations. The air-powered, operator controlled shifter eliminates manual shifting and promotes easy cleaning. The semi-automatic version operates with a rocker button control to move the shifter back and forth along the length of the filter press. We also offer a fully automatic option. This system automatically moves each plate in succession without interruption unless overridden by the operator.



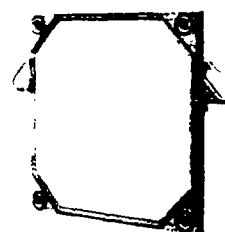
The type of filter plates most often supplied with a J-Press is a recessed chamber plate. They are made of polypropylene for superior corrosion resistance and long service life. Plates are either gasketed or non-gasketed plate and frame, or diaphragm type. The gasketed plate allows less leakage than the non-gasketed type due to an O-ring seal around the recessed chamber and filtrate discharge eyes.



Complete range of plate types and sizes.



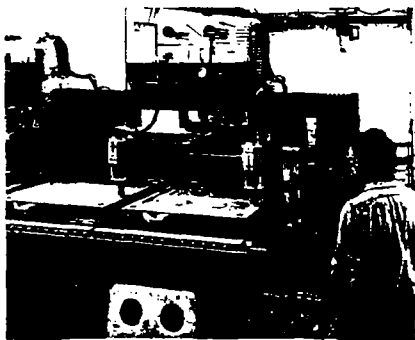
Non-gasketed plate



Gasketed plate

The filter cloths used in non-gasketed plates extend beyond the plate itself and form the seal between the plates. Filter cloths are made of polypropylene, polyester, cotton and other materials and come with a variety of weave patterns depending on application and desired results.

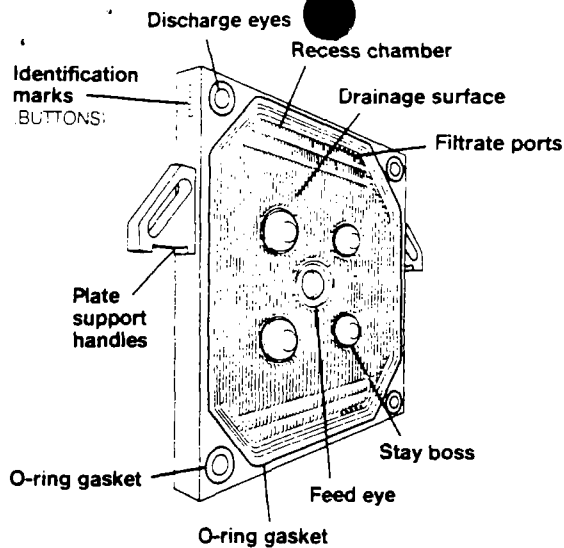
If process requirements call for extra high performance and the production of the driest filter cake possible, JWI can provide its presses with "diaphragm squeeze" plates. Their construction is similar to the normal recessed chamber plate; however, the drainage surfaces on the face of the plates are flexible diaphragms. After the filtration cycle is completed and the recessed chambers are filled with solids, and before the



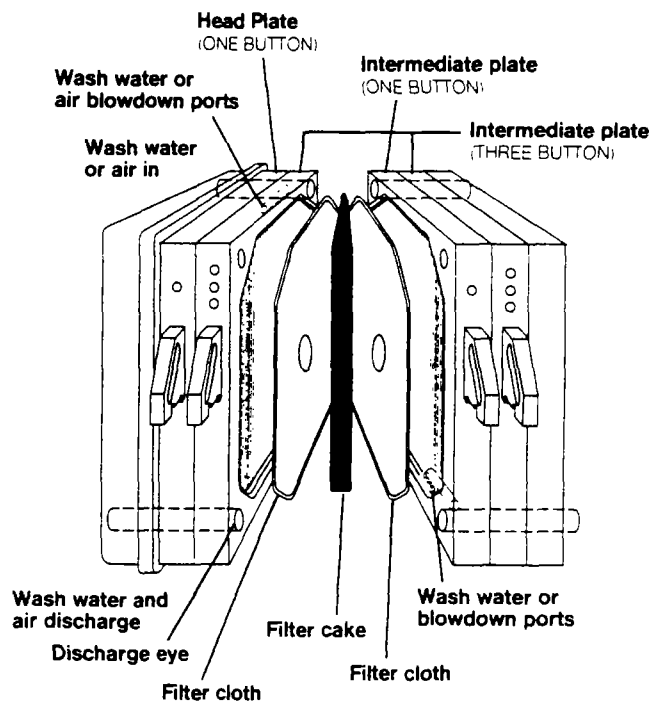
CNC machining combines with skilled craftsmanship.

press is opened, air or water pressure is applied behind the diaphragms causing them to flex outward to exert additional mechanical pressure on the filter cake.

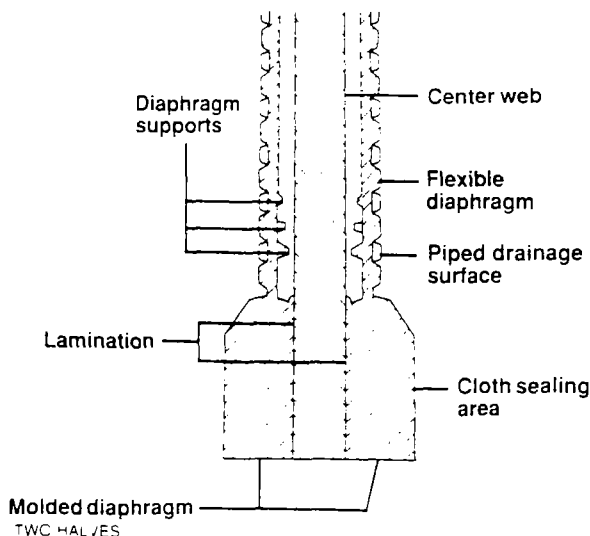
This squeezes the cake and further reduces any remaining moisture



Typical molded recessed chamber plate



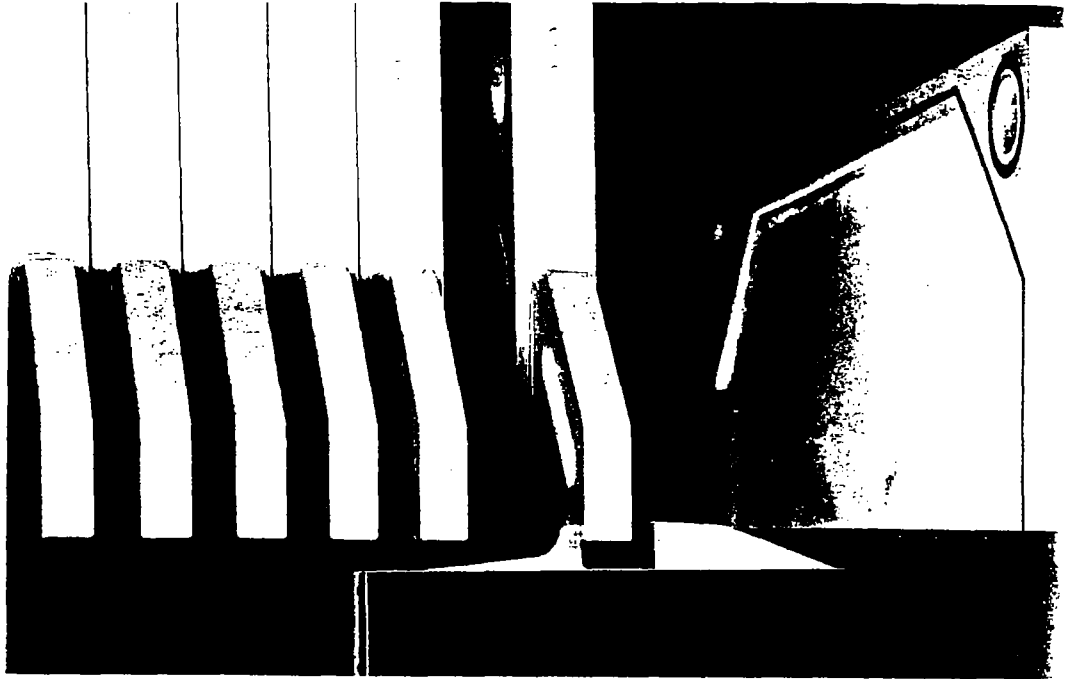
Wash water or air blowdown path



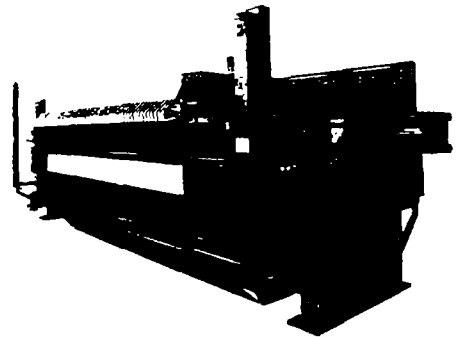
Diaphragm plate construction

Plate Shifting

JWI's plate shifting mechanism is a time and labor saver that simplifies cake removal from the J-Press. The completely air-powered shifter requires no electrical connections and is available either as a semi-automatic unit or with an fully automatic option. The semi-automatic shifter has a rocker button control with a "deadman" safety feature. The operator guides the shifter, in its enclosed safety housing, to the proper plate position. The automatic system on the other hand, moves from plate to plate without interruptions unless stopped by the operator. There are three types of automatic control options: 1. "deadman" push-button, 2. light curtain, 3. trip wire.



Fully automatic plate shifting system...
safety guard removed for clarity



1000mm - 40ft³ J-Press with
bombay drainage doors,
safety light curtain and guard
on non-operating side

Specification/Selection Charts

The following formula is for establishing J-Press volume (ft³) (L) for most dewatering applications:

$$\begin{aligned} \text{Filter Press Volume (ft}^3\text{) (L)} &= \frac{\text{Total volume of product feed (gallons) (liters)} \times \text{\% solids concentration of product feed (see*)} \times 8.34 \text{ (lbs per gallon of water) (1kg/L) (density of water)} \times \text{specific gravity of feed slurry}}{\text{Density of wet filter cake (lbs/ft}^3\text{) (kg/L)} \times \text{\% dry solids content of filter cake (see*)}} \Rightarrow \text{lbs (kg) dry solids} \\ &\text{or} \\ &\Rightarrow \text{cake density} \times \text{\% cake solids} \end{aligned}$$

Density of wet filter cake = Specific gravity of wet filter cake x the density of water

For filtration applications where feed solids are less than 1%, the filtration area often is the controlling parameter rather than volume. For such applications, contact JWI for size recommendations. **Also, for advice on sizing for any application, contact JWI or our representative.**

Model Size/Capacity (for 100 psi (7 bar) design, 1 1/4", 32MM thick Cake - other thicknesses available)

PRESS SIZE	Volume (ft ³) Volume (L)	0.1 2.8	0.2 5.7	0.3 8.5	0.4 11.3	0.5 14.2	1 28	1 2
250 mm Height-15"(381mm) Width-18.5"(470mm)	Chambers Length (in) Length (mm)	3 24 607	5 28 712	8 34 870	10 38 975			
320 mm Height-17.8"(451mm) Width-21.3"(541mm)	Chambers Length (in) Length (mm)		3 26 661	5 30 772	7 35 883	8 37 931		
470 mm Height-45.8"(1162mm) Width-33"(838mm)	Chambers Length (in) Length (mm)					3 39 979	6 45 1152	5 132
630mm Height-51"(1299MM) Width-36"(916mm)	Chambers Length (in) Length (mm)							
800mm Height-58"(1473mm) Width-43.5"(1105mm)	Chambers Length (in) Length (mm)							

PRESS SIZE	Volume (ft ³) Volume (L)	25 708	30 850	35 991	40 1133	45 1274	50 1416	6 169
1000 mm Height-66.5"(1689mm) Width-51.5"(1308mm)	Chambers Length (in) Length (mm)	30 172 4369	36 184 4681	42 199 5054	48 213 5407	54 227 5770	60 241 6133	
1200 mm Height-74.5"(1892mm) Width-60"(1524mm)	Chambers Length (in) Length (mm)						39 217 5521	4 23 600
1500 mm Height-95.7"(2432mm) Width-74.9"(1903mm)	Chambers Length (in) Length (mm)							

NOTES: Additional sizes and capacities available - Consult factory.

Length dimension based upon filter pack of non - gasketed plate design.

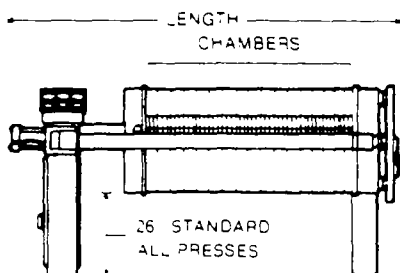
Length dimension does not include plate shifter.

Length dimensions are approximate, consult factory for exact dimensions.

* % concentration should be expressed in decimal form (e.g. 2% = .02)

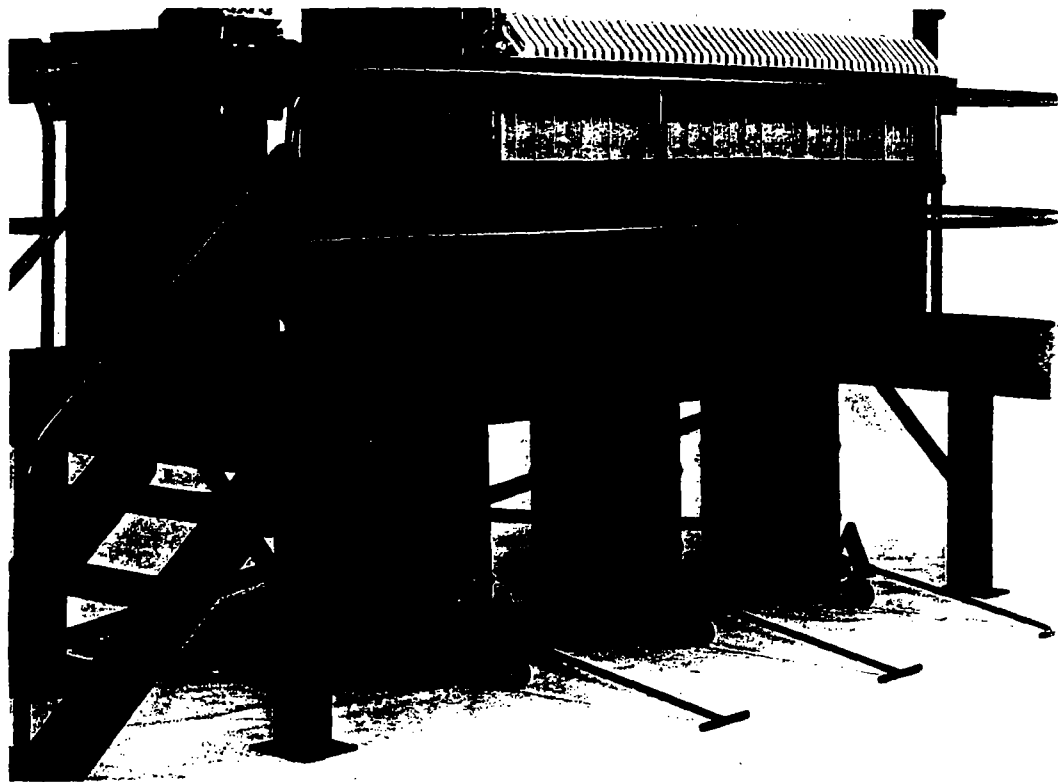
2 57	3 85	4 113	5 142	6 170	8 227	10 283	12 340	15 425	20 566	25 708
13 75 1899	19 88 2244	25 88 2244								
7 85 2168	11 94 2398	14 101 2570	18 110 2800	21 117 2973	28 133 3376					
					16 126 3199	20 136 3457	24 144 3664	29 156 3955	39 179 4537	49 202 5119

70 1982	80 2265	90 2549	100 2832	125 3540	150 4248	175 4955	200 5663	225 6371	250 7079	275 7787
55 257 521	63 276 7021	71 296 7521	79 316 8021	98 363 9209						
				64 306 7772	77 341 8650	90 375 9527	103 410 10405	115 442 11215	128 476 12092	141 511 12970



Material Handling

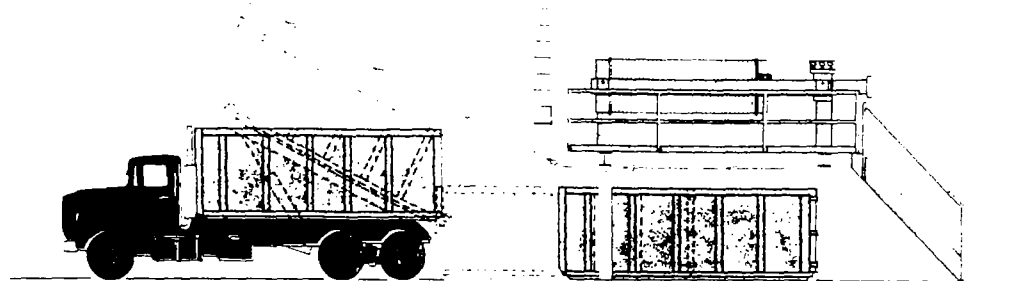
Several practical options exist to assist J-Press owners with efficient means for handling the filter cake produced during press cycles. For small presses, dumpsters are the method most widely used. These dumpsters, equipped with casters and optional self-dump fork lift mounts, can be removed manually or with a lift truck. Another material handling option for small presses is the drum disposal system. This option includes a series of chutes that catch filter cake as it falls from the press and is directed into 55 gallon drums. These presses are mounted on a platform, with catwalks, railings and stairs. Roll-off containers or specially designed conveyor systems are frequently used to provide efficient cake removal from large volume operations. In every instance, JWI representatives work with you to design and equip your J-Press to accomplish your needs in the most practical and cost efficient manner.



Drum disposal system

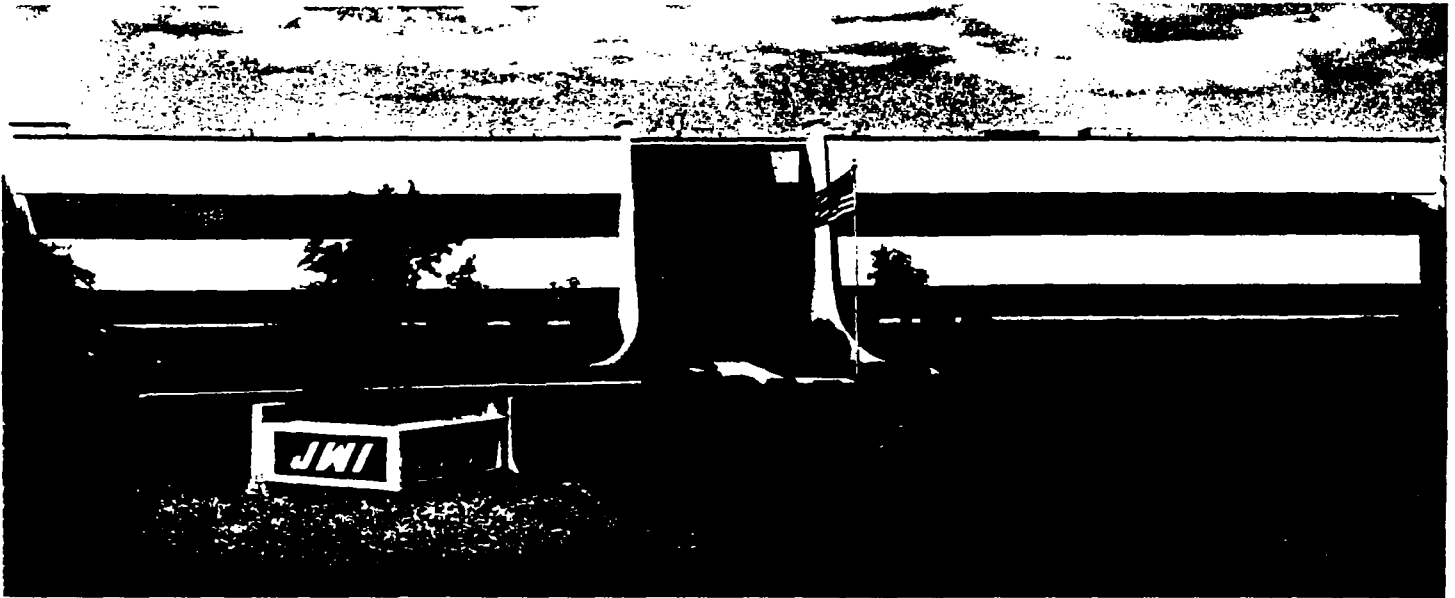


Self-dumping dumpster



Roll-off container system

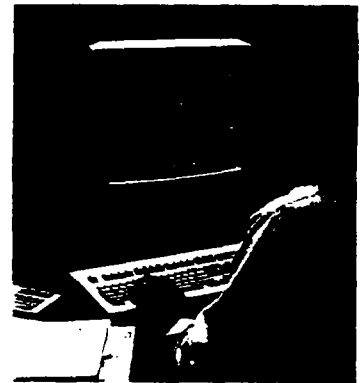
JWI, The Company




Quality and service are the watchwords at JWI. Since its founding in 1977, continuous research and development has guided and expanded our product line to produce premium quality equipment for an expanding range of applications, including filter presses and sludge drying equipment. Our capabilities set the standards for the industry from CAD support, to our filtration laboratory, to our field service group. This means our customers can depend upon us to make the difference in the quality of their product.

Today, JWI markets and services its products on a global scale. We are also actively exploring new market arenas that we expect to serve with existing products as well as with an array of new products currently under development. We have been able to achieve this remarkable rate of growth due to the commitment of our people. We will continue to fill the needs of an expanding base of customers with products that exceed their expectations for quality of design, manufacture and performance.

With JWI, you not only get the best products available, you get the support of the entire company as well.



JWI reserves the right to change equipment specifications, options, and pricing and/or discontinue models and options at any time without notice or obligation. Illustrated equipment may include optional components.

 **JWI** Inc. 2155 112th Avenue, Holland, Michigan 49424-9604 U.S.A. • Telephone (616) 772-9011 • Fax (616) 772-4516
1-800-245-3006

CHEMETCO, INC.
Hartford, Illinois

STORMWATER(/GROUNDWATER) TREATMENT SYSTEM

LISTING OF TREATMENT UNITS

Item 1 - REACTION TANK

One (1) multi-stage reaction tank, suitable baffled or divided, and providing 15 (est.) minutes pH adjustment, (est.) 5 minutes flocculation and (est.) 5 minutes final pH adjustment. Tank to have panel brackets, pump shelves and mixer mounts. Tank is carbon steel construction with a coal tar epoxy lining and polyurethane coated exterior.

Item 2 - REACTION MIXERS

Three (3) Lightnin, 316 SS*, 350 RPM mixers with A-310 impellers. Flocculation mixer to be electronic variable speed.

Item 3 - pH CONTROLLERS

Two (2) Great Lakes Instruments Model 672P*, digital display pH controllers with dual set points and 4-20 ma output.

Item 4 - CHEMICAL FEEDER

Three (3) Pulsafeeder* electronic metering pumps each rated for acid/caustic service and 0-10 GPH. One pump each for ferric sulfate, acid and sodium sulfide.

One (1) Stranco* polyblend to automatically prepare, age, and feed diluted anionic polymer.

One (1) 350 gallon and one (1) 150 gallon polyethylene tanks with 316 SS Lightnin* mixers for lime and ferric storage.

One (1) Aro* ½ inch, air operated diaphragm pump for lime slurry and feed.

Item 5 - CONTROL PANEL

One (1) NEMA 4 control panel for central operation of the system. Panel to contain all necessary relays, timers, running lights, HOA switches, transformers and motor starters.

CHEMETCO, INC.
Hartford, Illinois

STORMWATER/(GROUNDWATER) TREATMENT SYSTEM

LISTING OF TREATMENT UNITS - Continued

Item 6 - CLARIFIER

One (1) GLE Model IPC-4-220*, Inclined Plate Clarifier with 220 square feet of effective area and mechanical thickener. Clarifier to have an Aro* air operated diaphragm pump mounted on its base to automatically pump thickened sludge to the sludge holding tank.

Item 7 - POLISHING FILTERS

One (1) set of GLE Model TPF-24-3*, triplex, automatic, self backwashing filters with multi media consisting of anthracite, silica sand, fine garnet and support beds. Filter to have PLC logic.

One (1) clarifier clear well with air diffusers, level controls and filter feed pumps rated at 100 GPM @ 50 PSI.

Item 8 - SLUDGE DEWATERING

One (1) 1050 gallon, 30° cone bottom, fiberglass sludge tank.

One (1) Aro*, 1", air operated diaphragm pump and accessories.

One (1) JWI* or equal, recessed chamber filter press with fork-liftable dumpster cart and air blow.

Item 9 - MISCELLANEOUS

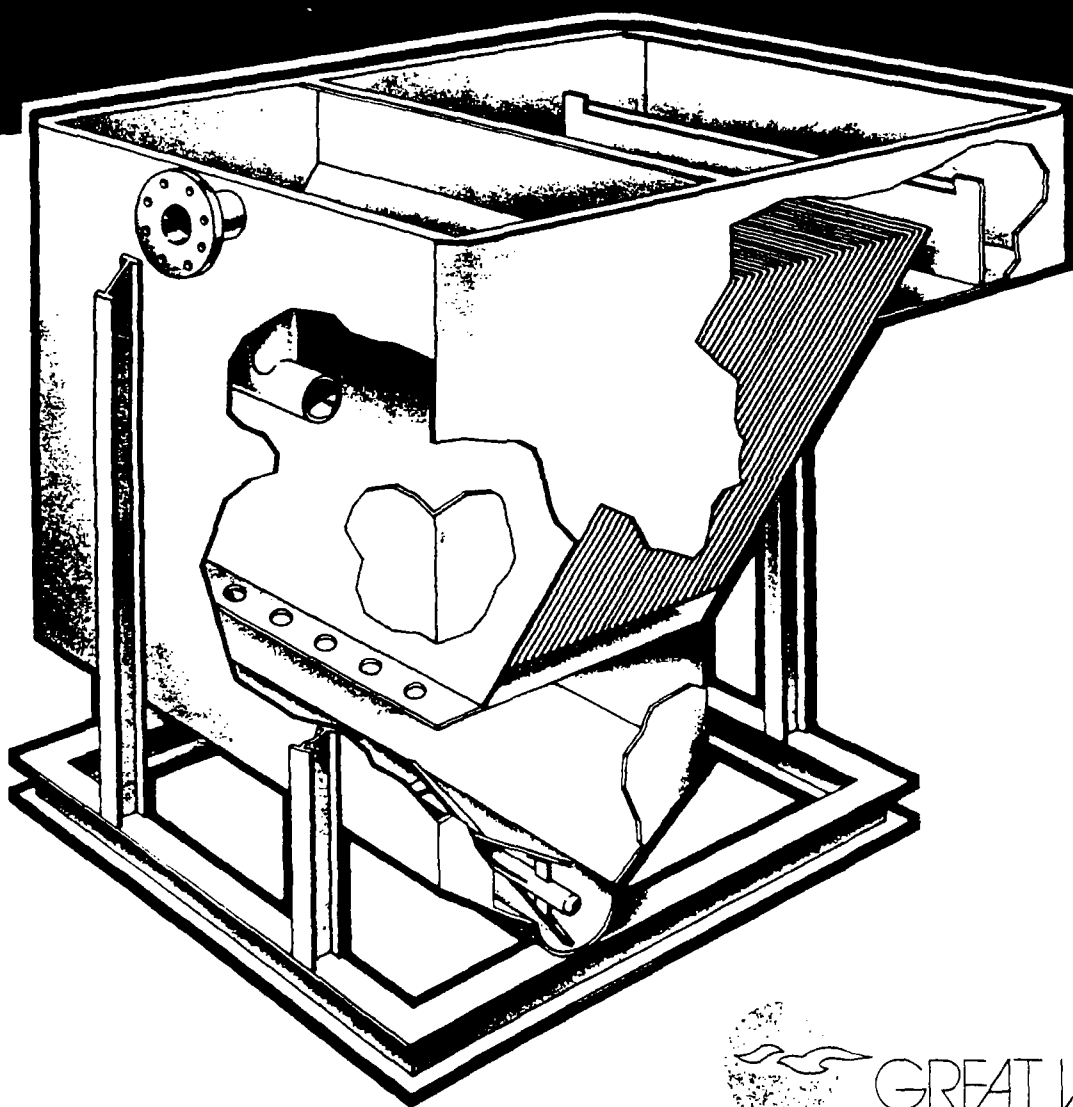
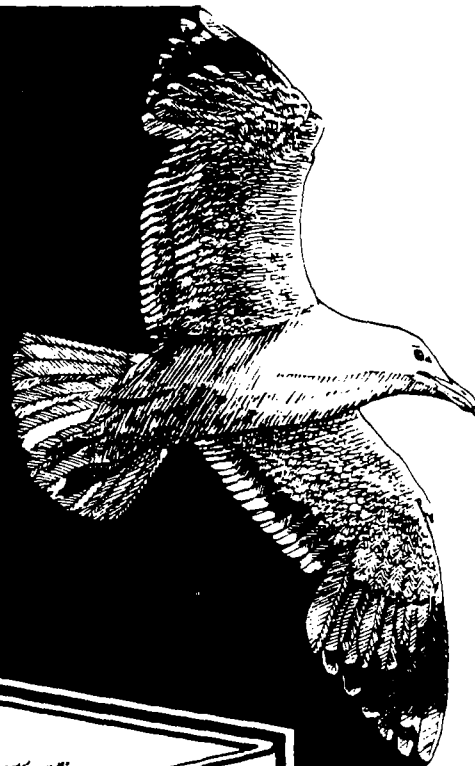
One (1) HP air compressor with receiver.

One (1) lot of walkway and ladder, approximately 20 lineal feet.

Enclosed are manufacturing specifications of the primary units comprising the treatment system. Final sizes and selections to be based upon pilot testing results achieved. Polymer and chemicals selected will be contingent upon pilot testing analysis.

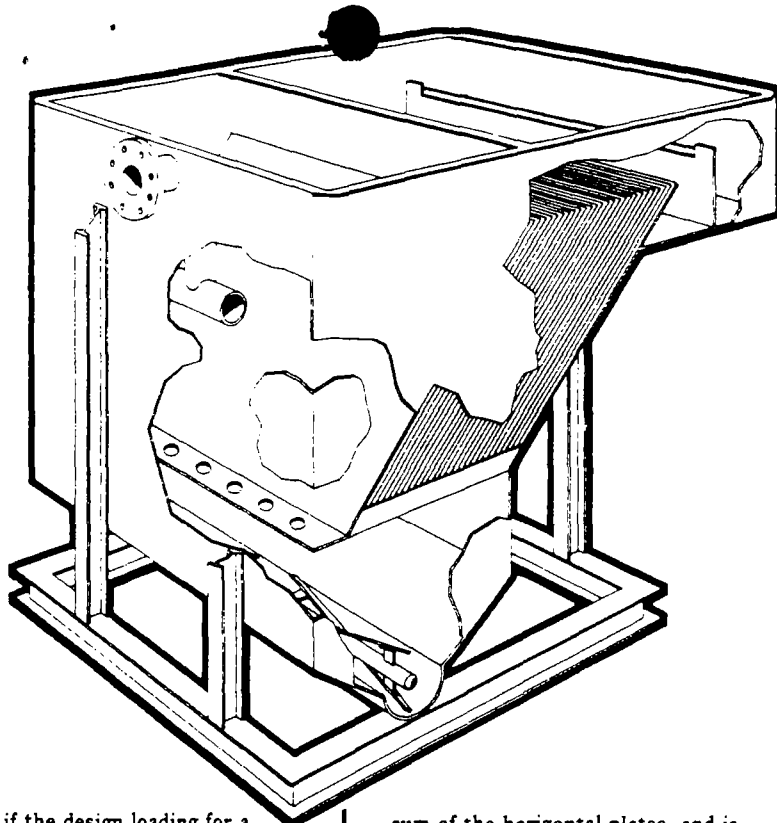
* OR EQUIVALENT MODELS TO BE USED.

INCLINED PLATE CLARIFIER



 GREAT LAKES
ENVIRONMENTAL
A WATERLINK COMPANY

The Great Lakes Inclined Plate Clarifier is a highly efficient gravity settler for the removal of suspended solids.



GENERAL INFORMATION

The Great Lakes Inclined Plate Clarifiers (IPC) are designed for the efficient removal of settleable suspended solids from water. The IPC design and performance is superior to other plate or tube type clarifiers. Suspended solids in the effluent are often less than a few PPM, eliminating the expense of polishing filters. The IPC's are compact and require only a quarter of the floor space of conventional clarifiers. Low ceiling requirements are a major benefit.

The inclined plate packs direct the solids to the sludge compartment, while baffles and weirs direct flow and control liquid level in the clarifier. The sludge compartment has pitched sides, access hatches and a mechanical thickening device. This arrangement insures positive removal of thickened sludge with easy access for maintenance.

The clarifiers are available in standard models ranging from 55 SQ FT to 2200 SQ FT. A major benefit is their low profile which allows installation in existing structures with low ceilings. The clarifiers operate by gravity and can be supplied with optional pre-coagulation/flocculation tanks plus polishing filters for the effluent.

DESIGN

The clarifiers are hydraulically sized for a maximum separation rate of 1.0 GPM/SQ FT based on effective surface area. Actual loading rates are dependent on the type of waste being treated and can be as low as 0.25 GPM/SQ FT for metal hydroxides. The loading rates are the same as would be used for a standard circular or rectangular clarifier without plate packs:

that is, if the design loading for a conventional clarifier is 0.25 GPM/SQ FT, the loading would be the same for a plate type clarifier.

PARALLEL PLATE SEPARATION PRINCIPLE

By the use of parallel plate packs, a large settling area can be incorporated into a relatively small space. To illustrate this, consider a stream containing particles of a certain density and size. These particles would demonstrate a settling path as shown in Figure A, settling a given height y for a given distance x of horizontal stream travel. Now examine Figure B, which divides the flow into parallel sections. Each section allows the particle to settle at the same rate. This process of dividing the flow into parallel sections can proceed in this fashion until the hydraulic radius becomes small enough to produce turbulence.

The result of this flow division produces a net settling effect equal to the

sum of the horizontal plates, and is directly comparable to the total horizontal area of a conventional circular clarifier.

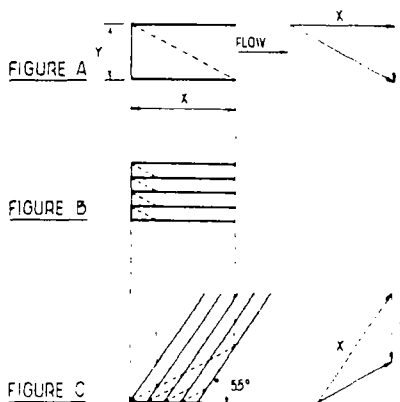
Horizontal plates would allow the solids to accumulate on the plates and eventually be swept back into the flow or lead to plugging. Therefore, the plates are tilted, preferably at a 55° angle. Examining Figure C, the particle would again settle the given height y for the given distance x of stream travel. However, the stream direction is different producing a different particle direction as shown. It can be shown by vector analysis and it can be seen graphically by the dashed lines between Figures B and C that the horizontal distance traveled until the particle contacts the lower plate is the same in Figures B and C. Therefore, for the tilted plates in Figure C, the effective plate area is equal to the actual plate area times the cosine of the angle of inclination from horizontal.

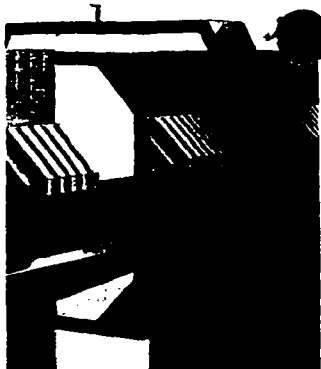
To insure proper solids settling and removal, the plate spacing must be sufficient so as to produce a hydraulic radius that allows the maximum flow to stay within viscous or streamlined flow. Even at the maximum hydraulic loading of 1.0 GPM/SQ FT, the Reynolds number for the Great Lakes IPC Clarifiers is quite low assuring streamlined flow.

OPERATION

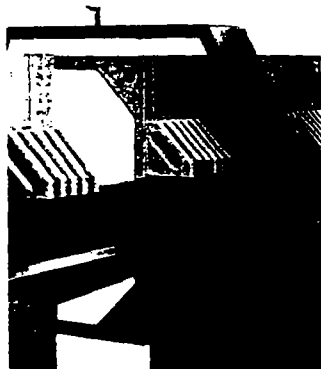
Inlet and Diffusion Chamber

Flow enters the inlet chamber where it is dispersed through a non-clog diffuser across the width of the clarifier. At the bottom of the inlet chamber, orifices further direct the flow evenly under the plate pack. The orifices provide a slight back pressure





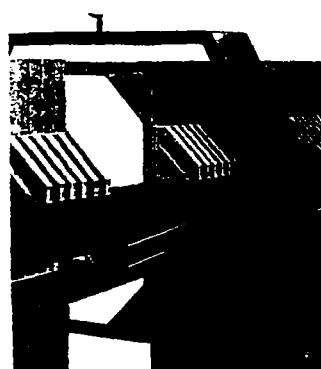
Shifter is positioned by the operator, with the stainless steel shifter plates between the handles of the polypropylene JWI filter plates.



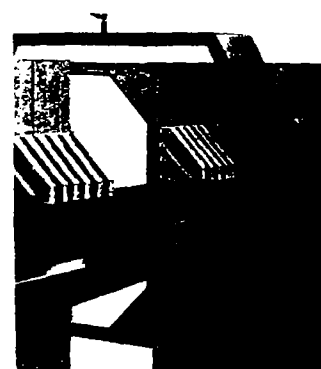
The operator presses the button starting the shifting sequence. The lift cylinder raises the shifter plates between filter plate handles.



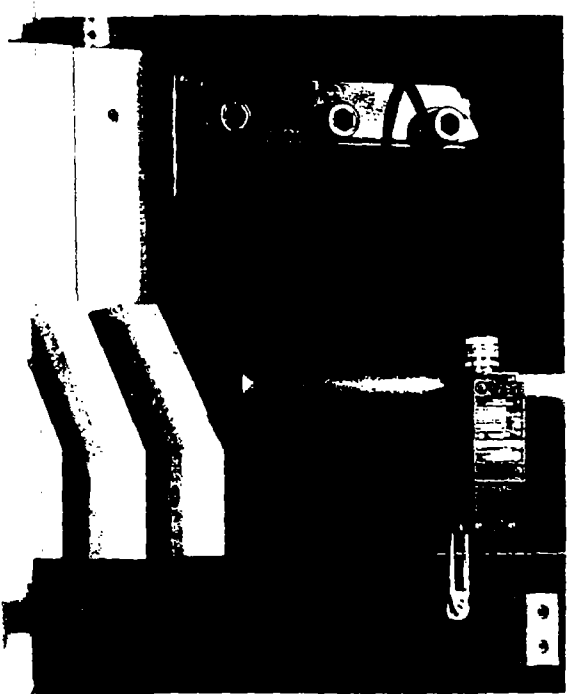
The filter plate is moved across the opening space by the push cylinder. This allows filter cake to fall from the chamber recesses.



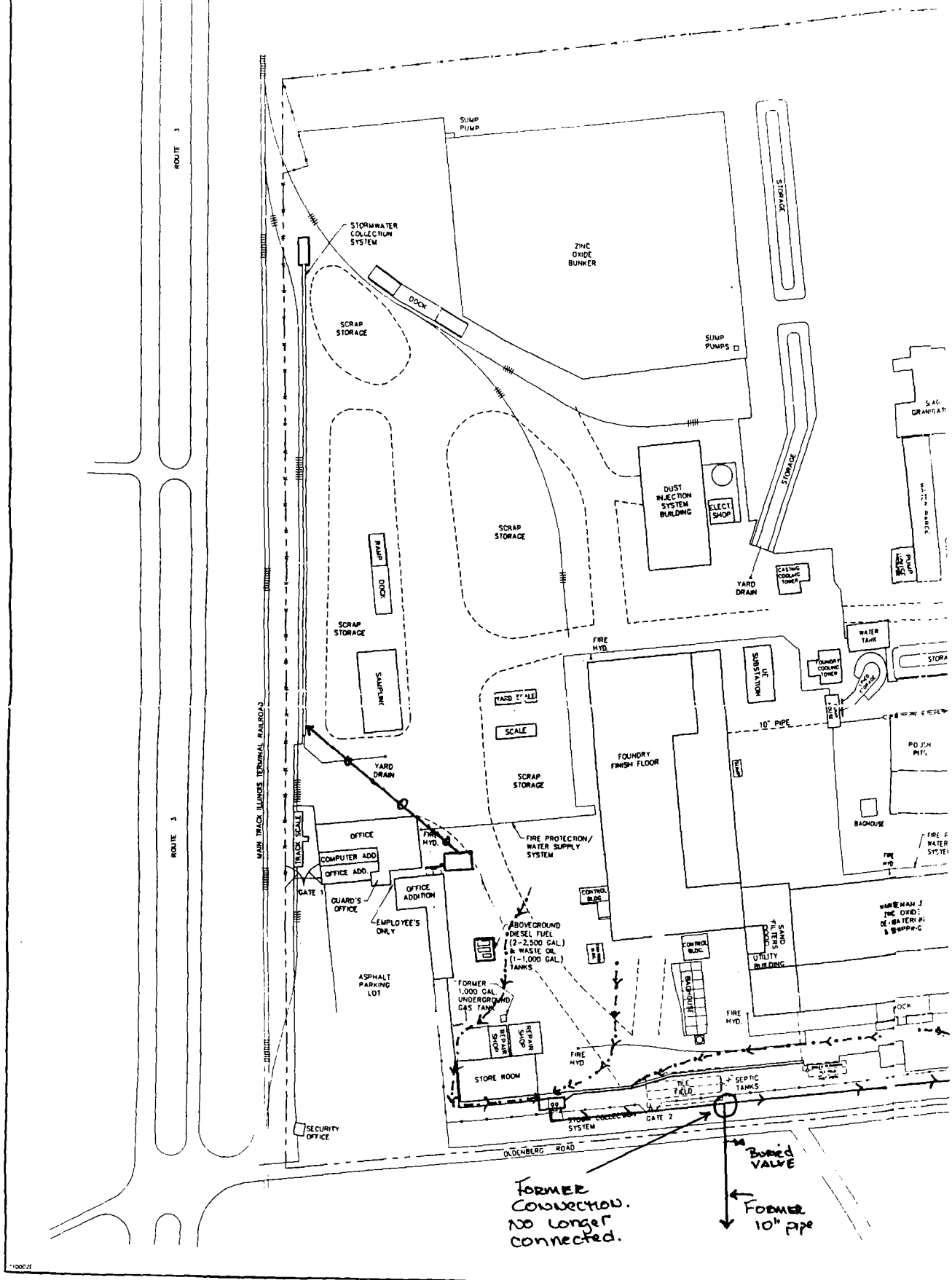
The filter plate is now pushed tightly against the cylinder end of plate stack. Operator then presses the return rocker switch and the lift cylinder lowers the shifter plates.



The shifter plate then returns to the shifter housing and is ready for the operator to restart the shifter sequence to separate the next plate.



Safety light curtain



APPLICATION FOR NPDES STORMWATER PERMIT (OUTFALL 004)
AND
APPLICATION FOR JOINT CONSTRUCTION AND OPERATING PERMIT
STORMWATER TREATMENT SYSTEM

CHEMETCO
Route 3 & Oldenburg Road
Hartford, Illinois 62048

ATTACHMENT 3:

Design Flow Line Chart and Calculations

JULY 1997

CHEMETCO , INC.

STORMWATER/WASTEWATER FLOW SHEET & CALCULATIONS

STORMWATER RUN-OFF GENERATION:

AVE. RAINFALL @
3.28"/month
(refer to attached
Rainfall Data)



Gross Monthly
Stormwater Discharge
= 0.27 ft.



Run-off Volume (cu.ft.) = $0.27 \times [(0.9 \times 1,107,700) + (0.5 \times 707,550)]$
 = 364,690 cu.ft. x 7.5 gals/cu.ft..
 = 2,735,175 gallons/month
 = 63 gallons/minute (gpm)

MAX. RAINFALL @
5.6"/month
(refer to attached
Rainfall Data)



Gross Monthly
Stormwater Discharge
= 0.47 ft.



Run-off Volume (cu.ft.) = $0.47 \times [(0.9 \times 1,107,700) + (0.5 \times 707,550)]$
 = 634,831 cu.ft. x 7.5 gals/cu.ft..
 = 4,761,235 gallons/month
 = 110 gallons/minute (gpm)

TOTAL WASTEWATER FLOW:

AVE.

STORMWATER
@ 63 GPM

+

SID SYSTEM
@ 3 GPM

+

TREATED SANITARY
WASTEWATER @ 3 GPM

= 70 GPM

MAX.

STORMWATER
@ 110 GPM

+

SID SYSTEM
@ 5 GPM

+

TREATED SANITARY
WASTEWATER @ 5 GPM

= 120 GPM

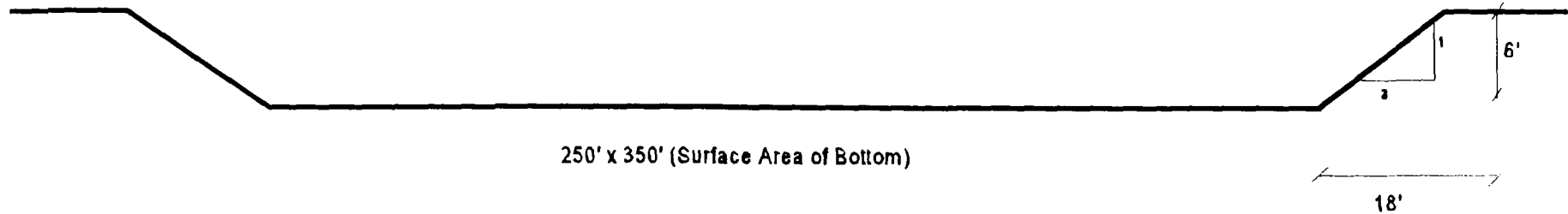
*DRAINAGE AREA(S): IMPERVIOUS AREA = 1,107,700 sq.ft.; Est. Run-off Coefficient = 0.9 (paved areas)
 UNPAVED AREA = 707,550 sq.ft.; Est. Run-off Coefficient = 0.5 (unpaved areas)

NPDES PERMIT APPL., 7/97
 ATTACHMENT 3

CHEMETCO, INC.
STORMWATER/WASTEWATER FLOW SHEET
RETENTION BASIN DESIGN/CALCULATIONS

VOLUME CAPACITY:

$$[(250 \times 350 \times 6) + (18 \times 6 \times 350) + (18 \times 6 \times (250 + 36))] = 593,688 \text{ cu.ft.}$$
$$593,688 \text{ cu.ft.} \times 7.5 \text{ gal./cu.ft.} = 4,452,660 \text{ gallons.}$$



APPLICATION FOR NPDES STORMWATER PERMIT (OUTFALL 004)
AND
APPLICATION FOR JOINT CONSTRUCTION AND OPERATING PERMIT
STORMWATER TREATMENT SYSTEM

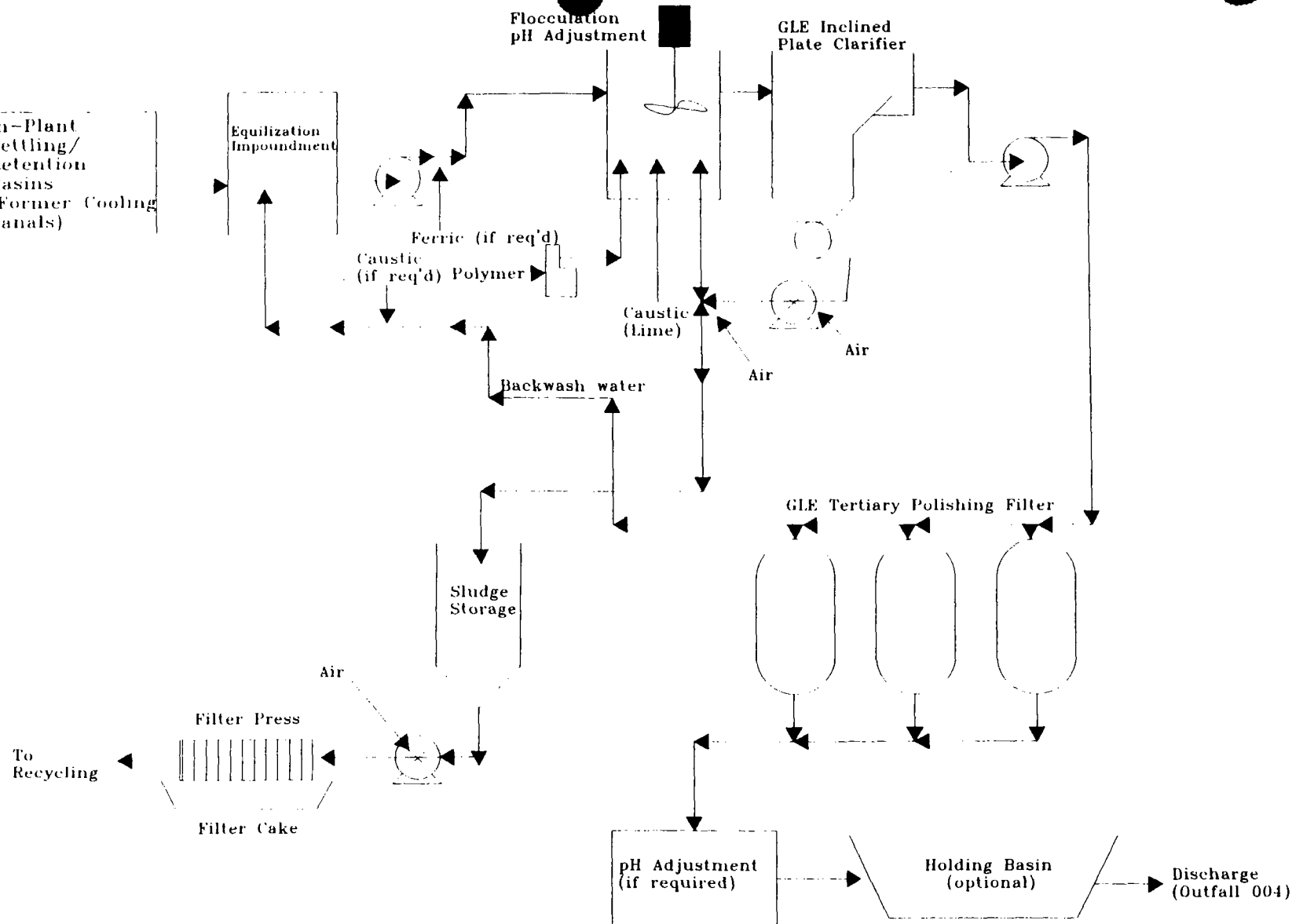
CHEMETCO
Route 3 & Oldenburg Road
Hartford, Illinois 62048

ATTACHMENT 4:

Process Flow Diagram/Narrative and Treatment System Design; (Manufacturer's) Specifications

JULY 1997

In-Plant
Settling/
Retention
Basins
(Former Cooling
Canals)



Attachment 4: Treatment Process

Chemetco, Inc.

CSD Environmental
Services, Inc.

CHEMETCO, INC.
Hartford, Illinois

STORMWATER/(GROUNDWATER) TREATMENT SYSTEM

NARRATIVE

Most agents requiring treatment or reduction are easily reduced to the required discharge limits. Constituents of concern at the plant are cadmium, copper and manganese. Bench scale studies have been initiated to confirm the required chemical additions.

Cadmium

Cadmium has its minimum point of solubility at approximately a pH of 11.2. At this pH level zinc and lead, which have minimum solubility's at 9.0 - 10.0, will be at higher solubilities than allowed for discharge. We have included ferric sulfate feed to assist in coagulation and perhaps co-precipitate of cadmium to the required levels at a lower than normal pH, if required. If this technique is not successful, it may be necessary to add a sulfide releasing agent to the reaction tanks.

Copper

Copper can form highly soluble complexes with ammonia which require sulfide precipitation. We do not believe the ammonia is present at levels high enough to cause a problem, but sulfide feed could turn out to be required.

Manganese

Manganese can be present in the manganous form which is soluble at alkaline pH ranges. It is possible that it has been oxidized to a perceptible form in the lagoons. We have, however, included aeration prior to the polishing filters, which should solve the problems of manganous ion.

BOD, COD and Ammonia

The proposed treatment system will not have much effect on these parameters, except to the extent they are represented by TSS in the storm water, in which case some reduction will occur.

CHEMETCO, INC.
Hartford, Illinois

STORMWATER(/GROUNDWATER) TREATMENT SYSTEM

PROCESS DESCRIPTION

Storm water is delivered to the treatment system at 100 -110 GPM average. In the first stage, the pH is adjusted to 9.5 - 10.0 with lime slurry. Concurrently ferric sulfate may be added as a prime coagulant and co-precipitant. The pH is adjusted automatically by means of pH controller and metering pump.

The pH adjusted water gravity flows to a flocculation stage where anionic polymer is added and variable speed mixing is provided. If required, sodium sulfide is added at this point.

The flocculated water gravity flows to an Inclined Plate Clarifier where the solids settle, are thickened, and pumped automatically to a sludge holding tank. The clarified water gravity flows to an aerated sump and is pumped to sand or (multi-media) pressure filters. The filters are automatic and use internally recirculated, filtered water for backwash. The backwash is sent to the feed pond.

The filtered water is discharged to a final pH adjustment tank where the pH is lowered by sulfuric acid addition prior to discharge. The acid addition is by means of a pH monitor operated metering pump.

Collected liquid sludge is periodically dewatered in a recessed chamber filter press. The filtrate is sent to floor drains which discharge to the feed pond.

Out of specification, pH, high filter sump level and low chemicals levels will close dry contacts which can trigger a remote alarm and/or stop the feed pumps.

VII. Discharge Information

A,B,C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided.

Tables VII-A, VII-B, and VII-C are included on separate sheets numbered VII-1 and VII-2.

E: Potential discharges not covered by analysis - Is any pollutant listed in Table 2F-2 a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☒ Yes (list all such pollutants below)☐ No (go to Section IX)Aluminum
Barium
Boron
Iron
Magnesium
Manganese
Tin**VIII. Biological Toxicity Testing Data**

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes (list all such pollutants below)☒ No (go to Section IX)**IX. Contract Analysis Information**

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☒ Yes (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)☐ No (go to Section X)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
Prairie Analytical Systems	P.O.Box 8326 205 Main Terminal Capitol Airport Springfield, IL 62791-8326	217/753-1148	Refer to Attch. 5
AM Laboratories, Inc.	151308 South Kesler Olathe, KS 66062	913/829-0101	Refer to Attch. 5
Environmental Analysis, Inc.	3278 N. Hwy. 67 Florissant, MO 63033	314/921-4488	Refer to Attch. 5

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (type or print)	B. Area Code and Phone No.
David A. Hoff, President	618/254-4381
C. Signature	D. Date Signed

VII. Discharge Information (Continued from page 3 of Form 2F)

Part A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled*	Sources of Pollutants
	Grab Sample * Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample* Taken During First 30 Minutes	Flow-weighted Composite		
Oil and Grease	41.3		13.1		4	Parking Areas; Plant
Biological Oxygen Demand (BOD5)	16.7		--		1	Processing/Materials
Chemical Oxygen Demand (COD)	< 20		--		1	Storage & Handling
Total Suspended Solids (TSS)	74		50.8		3	Areas; RCRA Regulated
Total Kjeldahl Nitrogen	3.3		--		1	Units (existing &
Nitrate plus Nitrite Nitrogen	1.1		--		1	closed)
Total Phosphorus	1.2		0.71		3	

pH	Minimum	8.0	Maximum	9.18	Minimum	Maximum
----	---------	-----	---------	------	---------	---------

Part B - List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

[illegible]

Part D - Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.							
1. Date of Storm Event	2. Duration of Storm (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm meas- ured and end of previous measurable rain event	5. Maximum flow rate during rain event (gallons/minute or specify units)	6. Total flow from rain event (gallons or specify units)	7. Season sample was taken	8. Form of Precipitation (rainfall, snowmelt)
Not Applicable	--	Samples collected from existing closed-loop stormwater management system, available data (max.'s) from Outfall 002 and from quarterly monitoring of the SIDS system.					

Refer to Attachment 3.

APPLICATION FOR NPDES STORMWATER PERMIT (OUTFALL 004)
AND
APPLICATION FOR JOINT CONSTRUCTION AND OPERATING PERMIT
STORMWATER TREATMENT SYSTEM

CHEMETCO
Route 3 & Oldenburg Road
Hartford, Illinois 62048

SECTION TWO:

IEPA JOINT CONSTRUCTION/OPERATING PERMIT APPLICATION FORMS

Form WPC-PS-1:
Application for Permit or Construction Approval

Schedule J:
Industrial Treatment Works Construction or Pre-Treatment Works

Schedule N:
Waste Characteristics

Illinois Environmental Protection Agency
 Permit Section, Division of Water Pollution Control
 P. O. Box 19276
 Springfield, Illinois 62794-9276
Application For Permit Or Construction Approval

WPC-PS-1

For IEPA Use:

1. Name and Location:

Name of project: Chemetco, Inc. -- Stormwater and Groundwater Treatment SystemMunicipality or Township: Hartford County: Madison2. Brief Description of Project: Construction & Operation of Stormwater Treatment System Prior to Discharge under NPDES Permit

3. Documents Being Submitted: If the project involves any of the items listed below, submit the corresponding schedule, and check the appropriate spaces.

Project

Private Sewer Connection/Extension..... A/B _____
 Sewer Extension Construct Only..... C _____
 Sewage Treatment Works..... D _____
 Excess Flow Treatment..... E _____
 Lift Station/Force Main..... F _____
 Sludge Disposal..... G _____

Spray Irrigation..... H _____
 Septic Tanks..... I _____
 Industrial Treatment or Pretreatment..... J _____
 Waste Characteristics..... N X _____
 Erosion Control..... P _____
 Trust Disclosure..... T _____

Plans: Title Refer to Table of ContentsNumber of Pages: Refer to Table of ContentsSpecifications: Title Refer to Table of ContentsNumber of Books/Pages: Refer to Table of ContentsOther Documents (Please Specify) Refer to Attachments 1 - 64. Land Trust: Is the project identified in item number 1 herein, for which a permit is requested, to be constructed on land which is the subject of a trust? Yes No

If yes, Schedule T (Trust Disclosure) must be completed and item number 7.1.1 must be signed by a beneficiary, trustee or trust officer.

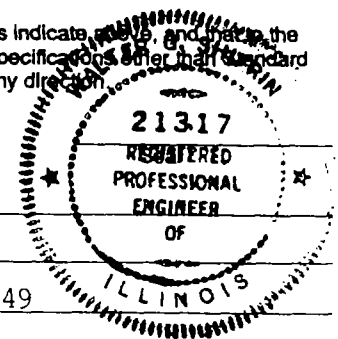
5. This is an Application for (Check Appropriate Line):

X A. Joint Construction And Operating Permit
 _____ B. Authorization to Construction (See Instructions) NPDES Permit No. IL00 _____ Issue Date _____
 _____ C. Construct Only Permit (Does Not Include Operations)
 _____ D. Operate Only Permit (Does Not Include Construction)

6. Certifications and Approval:

6.1 Certificate by Design Engineer (When required; refer to instructions)

I hereby certify that I am familiar with the information contained in this application, including the attached schedules indicate, plans, and specifications, and that to the best of my knowledge and belief such information is true, complete and accurate. The plans and specifications (specifications other than standard Specifications or local specifications on file with this Agency) as described above were prepared by me or under my direction.

Engineer Walter G. Shifrin
Name062-021317
Registration NumberFirm: Shifrin & Associates, Inc.Address: 230 S. Bemiston, Suite 305St. Louis, MO. 63105Phone Number: 314/721-2249Signature X Walter G. Shifrin

7. Certifications and Approvals for Permits:

7.1 Certificate by Applicant(s)

I/We hereby certify that I/we have read and thoroughly understand the conditions and requirements of this Application, and am/are authorized to sign this application in accordance with the Rules and Regulations of the Illinois Pollution Control Board. I/We hereby agree to conform with the Standard Conditions and with any other Special Conditions made part of this Permit.

7.1.1 Name of Applicant For Permit To Construct Chemetco, Inc.

Route 3 & Oldenburg Road (Mailing: P.O. Box 67) Hartford, IL.

62048

Street

City

State

Zip Code

Signature X David A. Hoff

David A. Hoff

(618) 254-4381

Printed Name

Phone Number

Title PresidentOrganization Chemetco, Inc.

7.1.2 Name Of Applicant For Permit To Own and Operate Chemetco, Inc.

Route 3 & Oldenburg Road (Mailing: P.O. Box 67) Hartford, IL 62048
 Street City State Zip Code
 Signature X [Signature] David A. Hoff (618) 254-4381
 Title President Printed Name Phone Number

7.2 Attested (Required When Applicant is a Unit of Government)--Not Applicable

Signature X _____ Date _____ Title _____
 (City Clerk, Village Clerk, Sanitary District Clerk, Etc.)

7.3 Applicants from non-governmental applicants which are not signed by the owner, must be signed by a principal executive officer of at least the level of vice president, or a duly authorized representative.

7.4 Certificate By Intermediate Sewer Owner -- Not Applicable

I hereby certify that (Please check one):

- _____ 1. The sewers to which this project will be tributary have adequate reserve capacity to transport the wastewater that will be added by this project without causing a violation of the Environmental Protection Act or Subtitle C, Chapter I, or
 _____ 2. The Illinois Pollution Control Board, in PCB _____ dated _____, granted a variance from Subtitle C, Chapter I to allow construction facilities that are the subject of this application.

Name and location of sewer system to which this project will be tributary: _____

Sewer System Owner _____

Street City State Zip Code
 Signature X _____ Date _____ Title _____

7.4.1 Additional Certificate By Intermediate Sewer Owner -- Not Applicable

I hereby certify that (Please check one):

- _____ 1. The sewers to which this project will be tributary have adequate reserve capacity to transport the wastewater that will be added by this project without causing a violation of the Environmental Protection Act or Subtitle C, Chapter I, or
 _____ 2. The Illinois Pollution Control Board, in PCB _____ dated _____, granted a variance from Subtitle C, Chapter I to allow construction and operation of the facilities that are the subject of this application.

Name and location of sewer system to which this project will be tributary: _____

Sewer System Owner _____

Street City State Zip Code
 Signature X _____ Date _____ Title _____

7.5 Certificate By Waste Treatment Works Owner-- Not Applicable; Industrial Pre-Treatment Prior to Discharge Under NPDES Proposed.

I hereby certify that (Please check one):

- _____ 1. The waste treatment plant to which this project will be tributary has adequate reserve capacity to treat the wastewater that will be added by this project without causing a violation of the Environmental Protection Act or Subtitle C, Chapter I, or
 _____ 2. The Illinois Pollution Control Board, in PCB _____ dated _____, granted a variance from Subtitle C, Chapter I to allow construction and operation of the facilities that are the subject of this application.

I also certify that the industrial waste discharges described in the application is capable of being treated by the treatment works.

Name and location of waste treatment works to which this project will be tributary: _____

Treatment Works Owner _____

Street City State Zip Code
 Signature X _____ Date _____ Title _____

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF WATER POLLUTION CONTROL
PERMIT SECTION
Springfield, Illinois 62706

SCHEDULE J INDUSTRIAL TREATMENT WORKS CONSTRUCTION OR PRETREATMENT WORKS

1. NAME AND LOCATION:

1.1 Name of project Chemetco, Inc. -- Stormwater and Groundwater Treatment System

1.2 Plant Location

1.2.1 SE 1/4 16 4N 9W 3rd
Quarter Section Section Township Range P.M.

1.2.2 Latitude 30 48 00 "North
Longitude 90 06 00 "West

1.2.3 Name of USGS Quadrangle Map (7.5 or 15 Minutes) SE/4 Alton 15' Quadrangle

2. NARRATIVE DESCRIPTION AND SCHEMATIC WASTE FLOW DIAGRAM: (see instructions)

Industrial Pre-treatment of Stormwater* Prior to Discharge Under NPDES Permit --
Refer to Attachment 4.

*Includes Groundwater Generated from SID System.

2.1 PRINCIPAL PRODUCTS: Copper Anodes, Solder, Granulated Slag and Zinc Oxide

2.2 PRINCIPAL RAW MATERIALS: Varying Grades and Types of Copper Scrap and Copper-Bearing
Materials.

3. DESCRIPTION OF TREATMENT FACILITIES:

3.1 Submit a flow diagram through all treatment units showing size, volumes, detention times, organic loadings, surface settling rate, weir overflow rate, and other pertinent design data. Include hydraulic profiles and description of monitoring systems. Refer to Attachment 2 and 4.

3.2 Waste Treatment Works is: Batch , Continuous X; No. of Batches/day , No. of Shifts/day

3.3 Submit plans and specifications for proposed construction. Refer to Attachment 4.

3.4 Discharge is: Existing ; Will begin on within 3 - 4 months of receipt of permit(s).

4. DIRECT DISCHARGE IS TO: Receiving Stream X Municipal Sanitary Sewer , Municipal storm or municipal combined sewer . If receiving stream or storm sewer indicated complete the following:

Name of receiving stream Unnamed Tributary; tributary to Long Lake;
tributary to ; tributary to .

5. Is the treatment works subject to flooding? If so, what is the maximum flood elevation of record (in reference to the treatment works datum) and what provisions have been made to eliminate the flooding hazard? NO

6. APPROXIMATE TIME SCHEDULE: Estimated construction schedule:

Start of Construction 01/97 - weather permitting Date of Completion 4/98
Operation Schedule Startup 3/98 - 4/98; Date Operation Begins 4/98
100% design load to be reached by year 1998

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center

IL 532 0018
WPC 158 REV.(4/91)

090-001

7. DESIGN LOADINGS

7.1 Design population equivalent (one population equivalent is 100 gallons of wastewater per day, containing 0.17 pounds of BOD₅ and 0.20 pounds of suspended solids; *

BOD 155 PE; Suspended Solids 491 PE; Flow 1526 PE

7.2 Design Average Flow Rate 100 gpm = 0.144 MGD.

7.3 Design Maximum Flow Rate 300 gpm = 0.432 MGD.

7.4 Design Minimum Flow Rate 70 gpm = 0.101 MGD.

7.5 Minimum 7-day, 10-year low flow _____ cfs _____ MGD. Not Applicable.

Minimum 7-day, 10-year flow obtained from _____

7.6 Dilution Ratio _____

8. FLOW TO TREATMENT WORKS (if existing): -- Not Applicable.

8.1 Flow (last 12 months)

8.1.1 Average Flow _____ MGD

8.1.2 Maximum Flow _____ MGD

8.2 Equipment used in determining above flows _____

9. Has a preliminary engineering report for this project been submitted to this Agency for Approval?

YES ___ NO X. If so, when was it submitted and approved. Date Submitted _____

Certification# _____

Dated _____

10. List Permits previously issued for the facility: NPDES Permit #IL0025747; RCRA Facility I.D.#1198010003; DAPC Facility I.D. #119801AAC

11. Describe provisions for operation during contingencies such as power failures, flooding, peak loads, equipment failure, maintenances shut-downs and other emergencies. Chemetco has designed sufficient retention capacity to accomodate such contingencies. In the event of "catastrophic" rain events (beyond the design max. anticipated from available rainfall data), Chemetco intends to propose direct (by-pass) discharge as needed to accommodate the additional volume loading and prevent flooding of the plant and system. Any direct discharges will be subject to sampling & analysis criteria developed under this permit. During these events, the SID System generation will be diverted, if necessary, into the plant's process operations (for use as make-up waters).

12. Complete and submit Schedule G if sludge disposal will be required by this facility. NA

13. WASTE CHARACTERISTICS: Schedule N must be submitted. ENCLOSED

14. TREATMENT WORKS OPERATOR CERTIFICATION: List names and certification numbers of certified operators:

Kevin Youngman -- will be assigned and certified as the Wastewater Treatment Plant Operator prior to start-up of operations.

*BOD:

Based on 103 gpm stormwater/groundwater flow @ 17mg/l;
Est. 3 gpm treated sanitary wastewater @ 150mg/l (assume 30% reduction)
= 26.4 lbs/day

*TSS:

Based on 103 gpm stormwater/groundwater flow @ 75mg/l;
Est. 3 gpm treated sanitary wastewater @ 150mg/l (assume 30% reduction)
= 98.2 lbs/day

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF WATER POLLUTION CONTROL
PERMIT SECTION
Springfield, Illinois 62706

SCHEDULE N WASTE CHARACTERISTICS

1. Name of Project Chemetco, Inc. -- Stormwater/Groundwater Treatment System
2. FLOW DATA

	<u>EXISTING</u>	<u>PROPOSED-DESIGN</u>
2.1 Average Flow (gpd)	NA	100 gpm = 144,000 gals/day
2.2 Maximum Daily Flow (gpd)	NA	300 gpm = 432,000 gals/day

2.3 TEMPERATURE

<u>Time of year</u>	<u>Ave. Intake Temp. F</u>	<u>Avg. Effluent Temp. F</u>	<u>Max. Intake Temp. F</u>	<u>Max. Effluent Temp. F</u>	<u>Max. Temp. Outside Mixing Zone F</u>
SUMMER	60 - 65	60 - 65	65	65	NA
WINTER	35 - 40	35 - 40	45	45	NA

2.4 Minimum 7-day, 10-year flow: _____ cfs MGD. -- Not Applicable.

2.5 Dilution Ratio: _____ -- Not Applicable.

2.6 Stream flow rate at time of sampling _____ cfs MGD. -- Not Applicable -- See **NOTE.
3. CHEMICAL CONSTITUENT Existing Permitted Conditions _____; Existing conditions _____; Proposed Permitted Conditions _____.

Type of sample: _____ grab (time of collection _____); _____ composite (Number of samples per day _____)

(see instructions for analyses required) **NOTE: Existing analysis performed on grab samples collected from current stormwater basins (cooling canals) of closed-loop mgmt. system and of the SID system quarterly monitoring.

Constituent	RAW WASTE (mg/l)	TREATED EFFLUENT *** Avg. (mg/l) Max.	UPSTREAM DOWNSTREAM SAMPLES (mg/l) (mg/l)
Ammonia Nitrogen (asN)	Refer to Attachment 5	(*)	Not Applicable
Arsenic (total)		0.25	
Barium		2.0	
Boron		(*)	
BOD ₅		30.0	
Cadmium		0.15	
Carbon Chloroform Extract		(*)	
Chloride		(*)	
Chromium (total hexavalent)		0.1	
Chromium (total trivalent)		1.0	
Copper		0.5	
Cyanide (total)		0.10	
Cyanide (readily released @150°F & pH 1.5)		(*)	
Dissolved Oxygen		(*)	
Fecal Coliform		200 per 100 ml.	

	RAW WASTE (mg/l)	TREATED EFFLUENT *** Avg. (mg/l) Max.	UPSTREAM (mg/l)	DOWNSTREAM SAMPLES (mg/l)
Fluoride	Refer to	15.0	Not	Applicable
Hardness (as Ca CO ₃)	Attachment 5	(*)		
Iron (total)		2.0		
Lead		0.2		
Manganese		1.0		
MBAS		(*)		
Mercury		0.0005		
Nickel		1.0		
Nitrates (asN)		(*)		
Oil & Grease (hexane solubles or equivalents)		15.0		
Organic Nitrogen (as N)		4.0 (Nov - March)		
pH		6 - 9		
Phenols		0.3		
Phosphorous (as P)		(*)		
Radioactivity		NA		
Selenium		(*)		
Silver		0.1		
Sulfate		(*)		
Suspended Solids		15.0		
Total Dissolved Solids		(*)		
Zinc		1.0		
Others -- Organics (Table 2F-2, 2F-3, 2F-4 Constituents) not present in the wastewater pursuant to analysis (Refer to Attachment 5); will be subject to Pollution Prevention Provisions (Refer to Attachment 6).				
***Standards Established under 35 IAC, Subtitle C, Part 304 (as applicable).				
(*) = No Standards Established; or not applicable.				

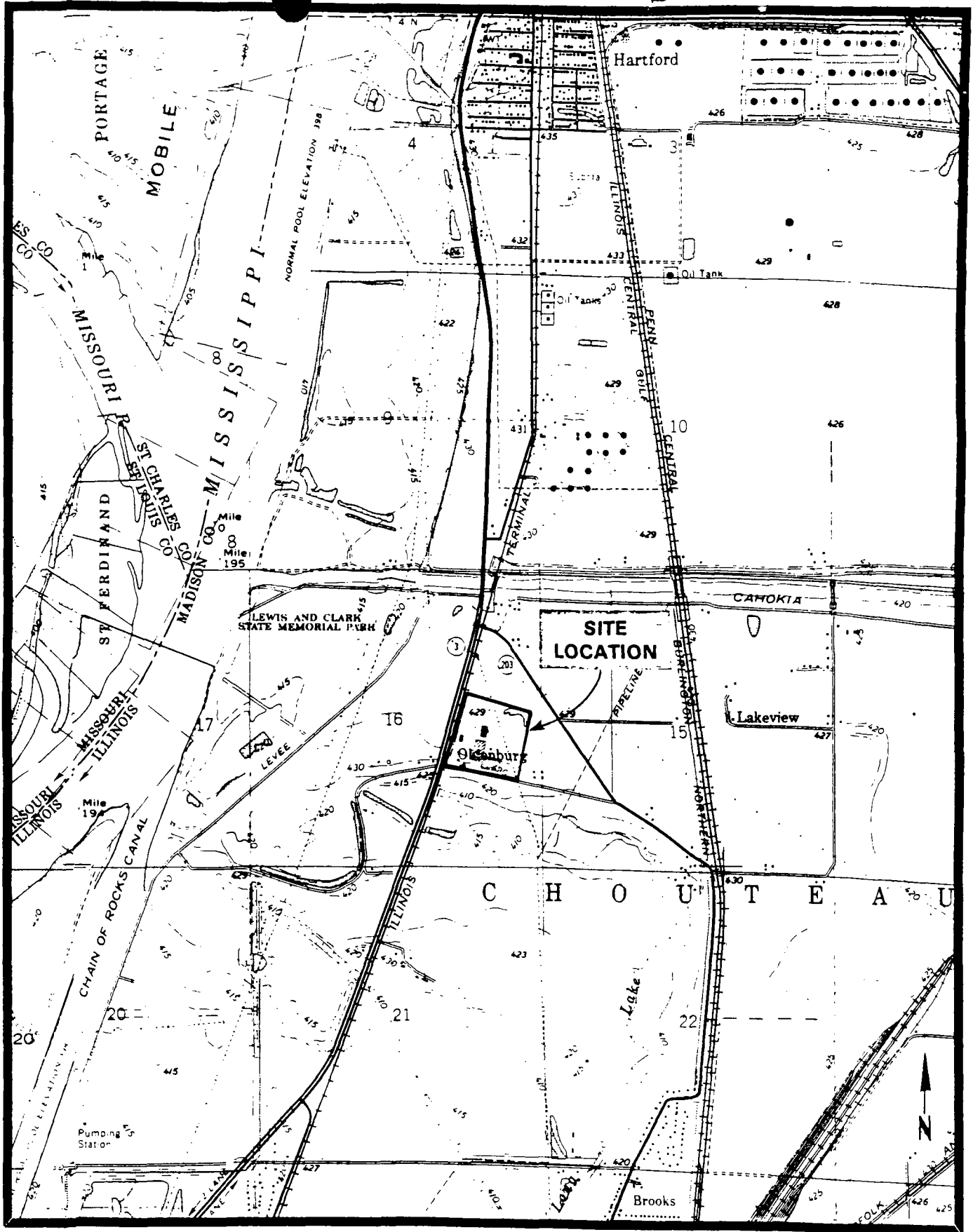
APPLICATION FOR NPDES STORMWATER PERMIT (OUTFALL 004)
AND
APPLICATION FOR JOINT CONSTRUCTION AND OPERATING PERMIT
STORMWATER TREATMENT SYSTEM

CHEMETCO
Route 3 & Oldenburg Road
Hartford, Illinois 62048

ATTACHMENT 1:

Regional Site Topographic Location Map

JULY 1997



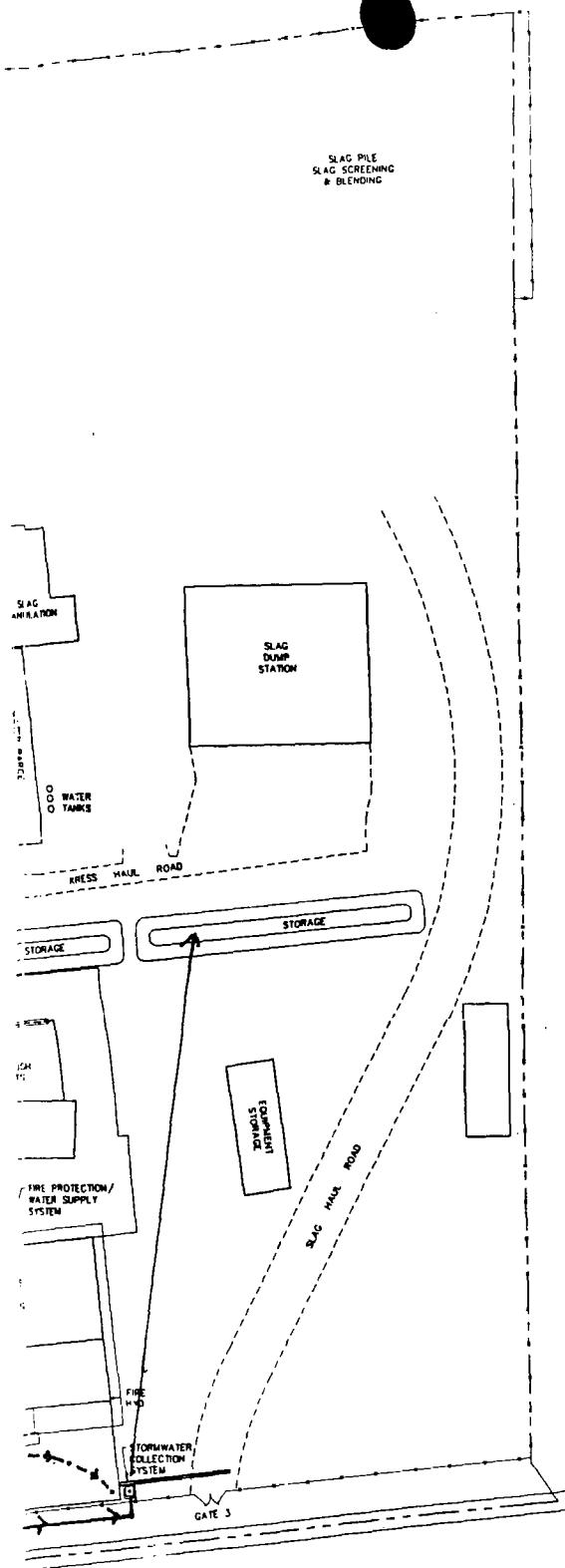
APPLICATION FOR NPDES STORMWATER PERMIT (OUTFALL 004)
AND
APPLICATION FOR JOINT CONSTRUCTION AND OPERATING PERMIT
STORMWATER TREATMENT SYSTEM

CHEMETCO
Route 3 & Oldenburg Road
Hartford, Illinois 62048

ATTACHMENT 2:

Topographic Site Plan Map

JULY 1997



NOTE:

THE FENCELINE IS THE PLANT BOUNDARIES. CHEMETCO OWNS MORE PROPERTY IN THE AREA, TO THE EAST & NORTHEAST IS AGRICULTURAL LAND LEASED TO AREA FARMERS, TO THE SOUTH IS A TRUCK PARKING LOT, THE FERTON'S RESIDENCE & MORE FARMLAND LEASED. THE PLANT SITE IS APPROX 40 ACRES. TOTAL OWNED ACREAGE IS ABOUT 112 ACRES.

- - - - - DRAINAGE AREAS
 ———→ STORMWATER FLOW
 ●—●— Treated Effluent

0 60 120
 SCALE IN FEET
 1" = 120'

ENSR ENSR CONSULTING & ENGINEERING			
SITE MAP CHEMETCO INC. HARTFORD, ILL.			
DESIGN	DATE	DRAWING NUMBER	
K.P.B.	3/93	FIGURE B-3	
CHECKED	APPROVED	SHEET NUMBER	REV. NO.
S.R.	X	1	0

[illegible]

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT (Untreated)**		4. UNITS		5. INTAKE (optional)		
	A. PRESENT	B. RECEIVED	C. OBSERVED	D. MAXIMUM VALUE		E. LONG TERM AVG. VALUE		F. NO. OF ANALYSES	G. CONCENTRATION	H. MASS
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS				-- Refer to Attachment 5.		W/SIDS**				
1B. Acenaphthene (83-32-9)			X						mg/l	
2B. Acenaphthylene (208-96-8)			X							
3B. Anthracene (120-12-7)			X							
4B. Benzidine (92-87-5)			X							
5B. Benzo (a) Anthracene (56-55-3)			X							
6B. Benzo (a) Pyrene (50-32-8)			X							
7B. 3,4-Benzo-fluoranthene (205-99-2)			X							
8B. Benzo (ghi) Perylene (191-24-2)			X							
9B. Benzo (k) Fluoranthene (207-08-9)			X							
10B. Bis (2-Chloroethoxy) Methane (111-91-1)			X							
11B. Bis (2-Chloroethyl) Ether (111-44-4)			X							
12B. Bis (2-Chloroisopropyl) Ether (102-60-1)			X							
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)			X							
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X							
15B. Butyl Benzyl Phthalate (85-68-7)			X							
16B. 2-Chloronaphthalene (91-58-7)			X							
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)			X							
18B. Chrysene (218-01-9)			X							
19B. Dibenzo (a,h) Anthracene (53-70-3)			X							
20B. 1,2-Dichlorobenzene (95-50-1)			X							
21B. 1,3-Dichlorobenzene (541-73-1)			X							

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT (Untreated)**		4. UNITS		5. INTAKE (optional)					
1. POLLUTANT AND CAS NUMBER (if available)	a. FIRST INC. REQUIRING A.R.	b. DE. LIABED PRESENT	c. DE. LIABED PRESENT	b. MAXIMUM XXXX VALUE		c. LONG TERM AVG. VALUE		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	8. LONG TERM AVERAGE VALUE		b. NO. ANALYSES
				b. MAXIMUM XXXX VALUE		c. LONG TERM AVG. VALUE					8. LONG TERM AVERAGE VALUE		
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)				Refer to Attachment 5.		SW/SIDS		***					
22B. 1,4-Dichlorobenzene (106-46-7)			X						mg/l				
23B. 3,3'-Dichlorobenzidine (91-94-1)			X										
24B. Diethyl Phthalate (84-66-2)			X										
25B. Dimethyl Phthalate (131-11-3)			X										
26B. Di-N-Butyl Phthalate (84-74-2)			X										
27B. 2,4-Dinitrotoluene (121-14-2)			X										
28B. 2,6-Dinitrotoluene (606-20-2)			X										
29B. Di-N-Octyl Phthalate (117-84-0)			X										
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)			X										
31B. Fluoranthene (206-44-0)			X										
32B. Fluorene (86-73-7)			X										
33B. Hexachlorobenzene (118-74-1)			X										
34B. Hexachlorobutadiene (87-68-3)			X										
35B. Hexachlorocyclopentadiene (77-47-4)			X										
36B. Hexachloroethane (67-72-1)			X										
37B. Indeno (1,2,3-cd) Pyrene (193-39-6)			X										
38B. Isophorone (78-59-1)			X										
39B. Naphthalene (91-20-3)			X										
40B. Nitrobenzene (98-95-3)			X										
41B. N-Nitrosodimethylamine (62-75-9)			X										
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X										

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT (Untreated)**								4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. DE- LIVERED PRE- SENT	c. DE- LIVERED AD- SENT	a. MAXIMUM VALUE		b. MAXIMUM VALUE (if available)		c. LONG TERM AVG. VALUE (if available) *		d. NO OF ANAL. YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO OF ANAL. YSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued) --				Refer to Attachment 5.				5.		SW/SID6***	mg/l					
43B. N-Nitrosodiphenylamine (86-30-6)			X													
44B. Phenanthrene (85-01-8)			X													
45B. Pyrene (129-00-0)			X													
46B. 1,2,4-Trichlorobenzene (120-82-1)			X													
GC/MS FRACTION - PESTICIDES --				Refer to Attachment 5.												
1P. Aldrin (309-00-2)			X													
2P. α-BHC (319-84-6)			X													
3P. β-BHC (319-85-7)			X													
4P. γ-BHC (58-89-9)			X													
5P. δ-BHC (319-86-8)			X													
6P. Chlordane (57-74-9)			X													
7P. 4,4'-DDT (50-29-3)			X													
8P. 4,4'-DDE (72-55-9)			X													
9P. 4,4'-DDD (72-54-8)			X													
10P. Dieldrin (60-57-1)			X													
11P. α-Endosulfan (115-29-7)			X													
12P. β-Endosulfan (115-29-7)			X													
13P. Endosulfan Sulfate (1031-07-8)			X													
14P. Endrin (72-20-8)			X													
15P. Endrin Aldehyde (7421-93-4)			X													
16P. Heptachlor (76-44-8)			X													

CONTINUED FROM PAGE 4-5																
1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			Stormwater		3. EFFLUENT (Untreated)**						4. UNITS		5. INTAKE (optional)		
	B. TESTING REQUIRED	D. DELIVERED PRESENT	C. DELIVERED ASSENT	B. MAXIMUM MONITORING VALUE		D. MAXIMUM MONITORING VALUE (if available) SIDS		C. LONG TERM AVG. VALUE (if available) *		I. NO. OF ANALYSES	A. CONCENTRATION	D. MASS	B. LONG TERM AVERAGE VALUE		D. NO. ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
GC/MS FRACTION - PESTICIDES (continued) — Refer to Attachment 5.																
17P. Heptachlor Epoxide (1024-57-3)			X								mg/l					
18P. PCB-1242 (53469-21-9)			X													
19P. PCB-1254 (11097-69-1)			X													
20P. PCB-1221 (11104-28-2)			X													
21P. PCB-1232 (11141-16-5)			X													
22P. PCB-1248 (12672-29-6)			X													
23P. PCB-1260 (11098-82-5)			X													
24P. PCB-1016 (12674-11-2)			X													
25P. Toxaphene (8001-35-2)			X													

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*Concentrations based upon grab sampling of UNTREATED Stormwater (from cooling canals & Outfall 002; and quarterly sampling of SIDS System). The following equation used to calculate proportional source contributions:

$$\text{mg/l} = \frac{\text{Stormwater} \quad \text{SIDS}}{\sum (100 \text{ gpm} \times \text{ave. conc.}) + (3 \text{ gpm} \times \text{ave. conc.})} \times 103 \text{ gpm}$$

**Values provided are based upon untreated effluent concentrations. Actual discharge will consist of stormwater and groundwater treated to meet the standards of 35 IAC, Subtitle C, Section 304.

**Stormwater / SIDS #
of samples / of samples (Note: Averaging based upon a minimum of 3 samples.)

II. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ YES (Identify the test(s) and describe their purposes below)

☒ NO (go to Section VIII)

III. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☒ YES (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)

☐ NO (go to Section IX)

A. NAME	B. ADDRESS	C. TELEPHONE (area code & no.)	D. POLLUTANTS ANALYZED (list)
rairie Analytical Systems	P.O. Box 8326 205 Main Terminal Capitol Airport Springfield, IL. 62791-8326	217/753-1158	Refer to Attachment 5.
AM Laboratories	15130 B South Kester Olathe, KS. 66062	913/829-0101	Refer to Attachment 5.
Environmental Analysis, Inc.	3278 N. Hwy 67 Florissant, MO. 63033	314/921-4488	Refer to Attachment 5.

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE (type or print)

B. PHONE NO. (area code & no.)

A. Hoff, President

618/254-4381

NATURE

D. DATE SIGNED

Form
2F
NPDES



United States Environmental Protection Agency
Washington, DC 20460

Application for Permit To Discharge Stormwater Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., SW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

[illegible]

11. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions. Not Applicable

[illegible]

B You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction. Refer to Attachment 6.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility. Refer to Attachment 2 -- Site Topographic Plan Map

IV. Narrative Description of Pollution Sources

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
004	1,107,700 sq.ft. (existing + proposed)	1,815,250 sq.ft.			

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed, in the last three years, to minimize contact by these materials with storm water runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

1. Scrap Metal -- stored outdoors in piles prior to feeding to furnaces.
2. Zinc Oxide -- new building constructed for indoor storage of materials; past materials handling allowed for outdoor storage; only one outdoor storage unit remains, which is intended for closure.
3. Slag -- stored outdoors. Slag is granulated and shipped via railcar for shingle mfg; additional markets for use are being investigated, i.e., Concrete Manufacturing
4. Maintenance Chemicals -- stored in 55 gallon drums, outdoors; future plans include the installation of hazardous materials storage buildings and/or separate containment and stormwater collection systems.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F.1
004	Stormwater will be treated by means of settling prior to chemical trmt. (polymer add.) and filtration (sand filters & filter press). Refer to Attachment 4 for details of the treatment system and Attachment 6 for details of existing & proposed pollution prevention controls.	1U, 2D, 2C, 1V, 5R

V. Nonstormwater Discharges

A. I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharges from these outfall(s) are identified in either an accompanying Form 2C or Form 2E application for the outfall.

Name and Official Title (type or print)	Signature	Date Signed
David A. Hoff, President		

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test

An evaluation was completed of the plant's processes and potential discharge pollutant sources. Tracing of the stormwater piping was completed by means of review of as-built plans and interview of knowledgeable plant personnel.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

Zinc Oxide Spill -- October 1996, Spill contained to South of Oldenburg Road on Chemetco Property. Quantity released estimated @ 5000 cubic yards. Cleanup is currently on-going.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT (Untreated)**		4. UNITS		5. INTAKE (optional)							
	A. TEST INCL. RE-QUIR. EU	B. RE-LEASED FRA-SENT	C. RE-LEASED AS SENT	B. MAXIMUM 30-DAY VALUE		D. MAXIMUM 30-DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		F. NO OF ANAL-YES	G. CONCENTRATION	H. MASS	E. LONG TERM AVERAGE VALUE		I. NO OF ANAL-YES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS				Refer to Attachment 5.				SW/SIDS**							
1B. Acenaphthene (83-32-9)			X								mg/l				
2B. Acenaphthylene (208-96-8)			X												
3B. Anthracene (120-12-7)			X												
4B. Benzidine (92-87-5)			X												
5B. Benzo (a) Anthracene (56-55-3)			X												
6B. Benzo (a) Pyrene (50-32-8)			X												
7B. 3,4-Benzo-fluoranthene (205-99-2)			X												
8B. Benzo (ghi) Perylene (191-24-2)			X												
9B. Benzo (h) Fluoranthene (207-08-9)			X												
10B. Bis (2-Chloroethoxy) Methane (111-91-1)			X												
11B. Bis (2-Chloroethyl) Ether (111-44-4)			X												
12B. Bis (2-Chloroisopropyl) Ether (102-60-1)			X												
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)			X												
14B. 4-Bromophenyl Phenyl Ether (101-56-3)			X												
15B. Butyl Benzyl Phthalate (85-68-7)			X												
16B. 2-Chloronaphthalene (91-58-7)			X												
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)			X												
18B. Chrysene (218-01-9)			X												
19B. Dibenzo (a,h) Anthracene (53-70-3)			X												
20B. 1,2-Dichlorobenzene (95-50-1)			X												
21B. 1,3-Dichlorobenzene (541-73-1)			X												

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT (Untreated)**		4. UNITS		5. INTAKE (optional)		
	A. TESTING REQUIRED	B. RELIABLE PRESENT	C. RELIABLE ABSENT	D. MAXIMUM AVERAGE VALUE (if available)		E. LONG TERM AVERAGE VALUE (if available)		F. CONCENTRATION	G. MASS	H. LONG TERM AVERAGE VALUE (if available)
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued) --				Refer to Attachment 5.				W/SIDS***		
22B. 1,4-Dichlorobenzene (106-46-7)			X					mg/l		
23B. 3,3'-Dichlorobenzidine (91-94-1)			X							
24B. Diethyl Phthalate (84-66-2)			X							
25B. Dimethyl Phthalate (131-11-3)			X							
26B. Di-N-Butyl Phthalate (84-74-2)			X							
27B. 2,4-Dinitrotoluene (121-14-2)			X							
28B. 2,6-Dinitrotoluene (606-20-2)			X							
29B. Di-N-Octyl Phthalate (117-84-0)			X							
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-86-7)			X							
31B. Fluoranthene (206-44-0)			X							
32B. Fluorene (86-73-7)			X							
33B. Hexachlorobenzene (118-74-1)			X							
34B. Hexachlorobutadiene (87-68-3)			X							
35B. Hexachlorocyclopentadiene (77-47-4)			X							
36B. Hexachloroethane (67-72-1)			X							
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)			X							
38B. Isophorone (78-59-1)			X							
39B. Naphthalene (91-20-3)			X							
40B. Nitrobenzene (98-95-3)			X							
41B. N-Nitrosodimethylamine (62-75-9)			X							
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X							

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT (Untreated)**				4. UNITS			5. INTAKE (optional)				
	A. TESTING REQUIRED	B. RELIEVED PRESENT	C. RELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available) *		d. NO OF ANAL YSES	e. CONCENTRATION	f. MASS	g. LONG TERM AVERAGE VALUE		h. NO OF ANAL YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued) --				Refer to Attachment 5.				5.		9/SIDS***					
43B. N-Nitro-sodiphenylamine (86-30-6)			X								mg/l				
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION - PESTICIDES --				Refer to Attachment 5.											
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Endosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

CONTINUED FROM PAGE 1-8															
1. POLLUTANT AND CAS NUMBER (If available)	2. MARK 'X'			Stormwater		3. EFFLUENT (Untreated)**					4. UNITS		5. INTAKE (optional)		
	A. TEST INC. OR QUA. KU	B. RE-CEIVED PRESENT	C. RE-CEIVED ABSENT	B. MAXIMUM MONITORING VALUE		D. MAXIMUM MONITORING VALUE (If available) SIDS		C. LONG TERM AVG. VALUE (If available) *		F. NO. OF ANALYSES	A. CONCENTRATION	D. MASS	B. LONG TERM AVERAGE VALUE		D. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - PESTICIDES (continued) — Refer to Attachment 5.															
17P. Heptachlor Epoxide (1024-67-3)			X								mg/l				
18P. PCB-1242 (53469-21-9)			X												
19P. PCB-1254 (11097-69-1)			X												
20P. PCB-1221 (11104-28-2)			X												
21P. PCB-1232 (11141-16-5)			X												
22P. PCB-1248 (12672-29-6)			X												
23P. PCB-1260 (11096-82-5)			X												
24P. PCB-1016 (12674-11-2)			X												
25P. Toxaphene (8001-35-2)			X												

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*Concentrations based upon grab sampling of UNTREATED Stormwater (from cooling canals & Outfall 002; and quarterly sampling of SID System). The following equation used to calculate proportional source contributions:

$$\text{mg/l} = \frac{\begin{array}{c} \text{Stormwater} \\ \sum (100 \text{ gpm} \times \text{ave. conc.}) + (3 \text{ gpm} \times \text{ave. conc.}) \end{array}}{103 \text{ gpm}}$$

**Values provided are based upon untreated effluent concentrations. Actual discharge will consist of stormwater and groundwater treated to meet the standards of 35 IAC, Subtitle C, Seciton 304.

***Stormwater / SIDS #
of samples / of samples (Note: Averaging based upon a minimum of 3 samples.)

ILD 048843809

004

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4-dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part, please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT (UNTREATED) **		4. UNITS		5. INTAKE (optional)					
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM VALUE		B. LONG TERM AVERAGE VALUE		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	B. LONG TERM AVERAGE VALUE		D. NC AN YS
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS													
1M. Antimony, Total (7440-36-0)			X	--	Believed not to be present	in levels of concern.				ng/l			
2M. Arsenic, Total (7440-38-2)			X	--	Believed not to be present	in levels of concern.				-			
3M. Beryllium, Total (7440-41-7)			X										
4M. Cadmium, Total (7440-43-9)	X	X		2.58		0.246		1.40	4/10				
5M. Chromium, Total (7440-47-3)			X	--	Believed not to be present	in levels of concern.							
6M. Copper, Total (7440-50-8)	X	X		1.31		109		2.71	5/10				
7M. Lead, Total (7439-92-1)	X	X		2.62		0.96		0.88	6/10				
8M. Mercury, Total (7439-97-6)	X	X		0.0008		--		--	2/--				
9M. Nickel, Total (7440-02-0)	X	X		16.0		103		7.34	3/10				
10M. Selenium, Total (7782-49-2)			X	--	Believed not to be present	in levels of concern.							
11M. Silver, Total (7440-22-4)			X	--	Believed not to be present	in levels of concern.							
12M. Thallium, Total (7440-28-0)			X	--	Believed not to be present	in levels of concern.							
13M. Zinc, Total (7440-66-6)	X	X		13.6		23		6.28	5/10				
14M. Cyanide, Total (57-12-5)			X										
15M. Phenols, Total			X										
DIOXIN													
2,3,7,8 Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS									

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT (UNTREATED) **		4. UNITS		5. INTAKE (optional)					
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	B. MAXIMUM DAY VALUE		C. LONG TERM AVG. VALUE		D. NO OF ANALYSES	E. CONCENTRATION	F. MASS	G. LONG TERM AVERAGE VALUE		H. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION ~ VOLATILE COMPOUNDS --				Refer to Attachment		5.			SW/SILS**				
1V. Acrolein (107-02-8)			X						mg/l				
2V. Acrylonitrile (107-13-1)			X										
3V. Benzene (71-43-2)			X										
4V. Bis (Chloro- methyl) Ether (542-88-1)			X										
5V. Bromoform (75-25-2)			X										
6V. Carbon Tetrachloride (56-23-5)			X										
7V. Chlorobenzene (108-90-7)			X										
8V. Chlorodi- bromomethane (124-48-1)			X										
9V. Chloroethane (75-00-3)			X										
10V. 2-Chloro- ethylvinyl Ether (110-75-8)			X										
11V. Chloroform (67-66-3)			X										
12V. Dichloro- bromomethane (75-27-4)			X										
13V. Dichloro- difluoromethane (75-71-8)			X										
14V. 1,1-Dichloro- ethane (75-34-3)			X										
15V. 1,2-Dichloro- ethane (107-06-2)			X										
16V. 1,1-Dichloro- ethylene (75-36-4)			X										
17V. 1,2-Dichloro- propane (78-87-5)			X										
18V. 1,3-Dichloro- propylene (542-75-6)			X										
19V. Ethylbenzene (100-41-4)			X										
20V. Methyl Bromide (74-83-9)			X										
21V. Methyl Chloride (74-87-3)			X										

APPLICATION FOR NPDES STORMWATER PERMIT (OUTFALL 004)
AND
APPLICATION FOR JOINT CONSTRUCTION AND OPERATING PERMIT
STORMWATER\GROUNDWATER) TREATMENT SYSTEM

PREPARED FOR:

CHEMETCO
Route 3 & Oldenburg Road
Hartford, Illinois 62048

JULY 1997

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Attachment 1: Regional Site Topographic Location Map

Attachment 2: Topographic Site Plan Map

Attachment 3: Design Flow Line Chart and Calculations

Attachment 4: Process Flow Diagram/Narrative and Treatment System
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Attachment 5: Untreated Stormwater/Groundwater Analysis Summary Table
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Attachment 6: Pollution Prevention Controls

APPLICATION FOR NPDES STORMWATER PERMIT (OUTFALL 004)
AND
APPLICATION FOR JOINT CONSTRUCTION AND OPERATING PERMIT
STORMWATER TREATMENT SYSTEM

CHEMETCO
Route 3 & Oldenburg Road
Hartford, Illinois 62048

SECTION ONE:

NPDES PERMIT APPLICATION FORMS

Form 1:
General Information

Form 2C:
Application for a Permit to Discharge Wastewater, Existing Manufacturing, Commercial, Mining
and Silvicultural Operations

Form 2F:
Stormwater Discharges Associated With Industrial Activity

JULY 1997

FORM 1 GENERAL		EPA		U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION <i>Consolidated Permits Program</i> (Read the "General Instructions" before starting.)		I. EPA NUMBER FIELD 048843809		II. GENERAL INSTRUCTIONS If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.	
III. FACILITY NAME		IV. FACILITY ADDRESS		VI. FACILITY LOCATION					

SPECIFIC QUESTIONS		MARK "X"			SPECIFIC QUESTIONS		MARK "X"		
	YES	NO	FORM ATTACHED		YES	NO	FORM ATTACHED		
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.?		X		B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.?		X			
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above?	X			D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.?		X			
E. Does or will this facility treat, store, or dispose of hazardous wastes?	X			F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water?		X			
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons?		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy?		X			
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area?	X			J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area?					

III. NAME OF FACILITY	
1	Chemetco, Inc.

IV. FACILITY CONTACT	
A. NAME & TITLE (last, first, & title)	
2	Cotter, Greg, Env. Manager
B. PHONE (area code & no.)	
618	254 4381

V. FACILITY MAILING ADDRESS	
A. STREET OR P.O. BOX	
3	P.O. Box 67
B. CITY OR TOWN	
4	Hartford
C. STATE	D. ZIP CODE
IL	62048

VI. FACILITY LOCATION			
A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER			
5	Route 3 & Oldenburg Road		
B. COUNTY NAME			
Madison			
C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE (if known)
6	IL	62048	

VII. SIC CODES (4-digit, in order of priority)

A. FIRST				B. SECOND			
7	3	3	4	7			
(specify) Secondary Non-ferrous Smelter				(specify)			
C. THIRD				D. FOURTH			
				7			
(specify)				(specify)			

VIII. OPERATOR INFORMATION

A. NAME												B. Is the name listed in Item VIII-A also the owner?			
Chemetco, Inc.												<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)										D. PHONE (area code & no.)					
F - FEDERAL		M - PUBLIC (other than federal or state)		(specify)		A		6		1		8			
S - STATE		O - OTHER (specify)				C		2		5		4			
P - PRIVATE						A		4		3		8			
						A		4		3		8			
E. STREET OR P.O. BOX															
P. O. Box 67															
F. CITY OR TOWN										G. STATE		H. ZIP CODE		IX. INDIAN LAND	
Hartford										IL		62048		Is the facility located on Indian lands?	
														<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)										D. PSD (Air Emissions from Proposed Sources)									
I L 0 0 2 5 7 4 7										N / A									
B. UIC (Underground Injection of Fluids)										E. OTHER (specify)									
N / A										N / A									
C. RCRA (Hazardous Wastes)										E. OTHER (specify)									
1 1 9 8 0 1 0 0 0 3										(specify)									

MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements. Refer to Attachment 1 and Attachment 2.

XII. NATURE OF BUSINESS (provide a brief description)

Chemetco, Inc., smelts and refines varying grades and types of copper scrap and copper bearing materials to produce copper anodes, solder, granulated slag, and impure zinc oxide. The electrolytic refining that was once part of the plant processes is no longer part of the facility operations.

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
David A. Hoff, President		8-1-97

MENTS FOR OFFICIAL USE ONLY

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY

IL 532-0357
ADM 39
054-002

Subject Attendance / Chemetco Mtg
Data _____
Reviewed by _____

Date 9/24/87

<u>Person</u>	<u>Representing</u>	<u>Telephone #</u>
Janice V. Perrino	IEPA	217-785-0830
G. Tod Rowe	IEPA, DLPC, Permits	(217) 782-6762
Robert F. Van Voorhies	Bryan, Cave Counsel for Chemetco	(202) 289-6100
MARK HANEY	ERT, BOSTON, MA CONSULTANT FOR CHEMETCO	617/369-8910
Cheng-Ping Chang	Chemetco	618 - 254-4381
H. DERRICK PETERSON	BRYAN, CAVE Counsel for Chemetco.	(202) 289-6100
JOEY MACKIEWICZ	IL ATTY GENERAL	(217) 782 9031
James Morgan	I A G	(217) 782-9031
ROBERT L. SCHLEUGER	IEPA FIELD OPERATIONS	618/345-6220
Bruce Carlson	IEPA - Enforcement	(217) 782-5544
HILES ZAMCO	IEPA - DAPC	(217) 782-7326
THOMAS HORNSHAW	IEPA - OFF. CHEM. SAFETY	(217) 785-0830
FLOYD HASSELRILS	GBB	703 573 5800
Chris Liebman	IEPA, DLPC, Permits	217/782-6762

December 2, 1980

Grand
Christ E. Boettcher
R.R. 1
East Alton, Ill, 62024
618-254-2520

RECEIVED

DEC 12 1980

E.P.A. — D.L.P.C.
STATE OF ILLINOIS

Mr. Thomas E. Cavanagh, Jr. Manager
Land Permit Section
Division of Land/Noise Pollution Center

Dear Sir:

Regarding your letter of November 20, 1980; concerning Chemetco Inc. There request for a processing and recovery permit. This company has been in business for approximately ten years. During this time they have abused any and all enviornmental permits they might have. Chemetco Inc. came into this aera in 1969, and purchased property that is and always has been agriculture property. This entire aera surrounding chemetco is farm ground, and is used as such.

We own and operate a truck farm on the surrounding property; and although we are a family bussiness this is all that we do. Since the Chemetco Inc. has been in operation, we have suffered extreme pollution of every kind.

1. Chemetco Inc. is a Eye-sore, come look at it sometime.
2. Noise- they make explosive noises off and on all the time.
3. Smoke- they smoke all the time, sometimes it is much worse than others, note photos, the smoke is very black sometimes, they usually lift the lid and leave the worst of the smoke at dusk, or at night, or on the week-end when known persons such as the enviornmental protection agency, is not able to be out and see it. This smoke makes our eyes burn, and also gives us soar throats. Also the smoke has been so thick at times it has almost caused auto accidents on Rt. 3.
4. Smell- it smells alot of the time more-so than not.
5. They also have liquid pollution problems, note photos, this was on our property. Also I would like to remind you that at one time about three or so years ago they had some leakage of sulfuric-acid, at the plant, I would refer you to the Alton Telegraph, and the press record, which ran the story, along with pictures.

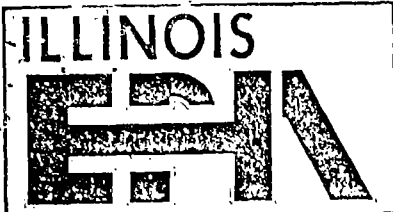
Chemetco Inc. is a mennace to the enviornment and hazardeous to our health. If you grant them this permit there is no way of telling what they will do next. We are against it. We feel that you at the E.P.A. have not kept close enough watch on them the way it is. We realize this is only our enviornment not yours, but would appricate it if someone would try to understand. You may want to keep in mind that if large companies keep buying up farm ground and are allowed to pollute it at our expense, the people of Illinois are going to suffer, in more that one way, first there food will cost them more becuse it will have to be shipped in, instead of coming from local markets, in our aera St. Louis. Not to mention the long range effect of the land itself, it takes years to clean up land that has been abused and polluted, if ever. Also the people of Illinois are taxed to pay for this. There are many other reasons to numerous to mention.

We are in the process of gaining support through our congressman, and also the Governor, as well as a legal pettion which is now in the process of being signed by the people in the immeadite aera of Chemetco Inc.

Thank You.

Christ E. Boettcher

C. Boettcher



Environmental Protection Agency

2200 Churchill Road, Springfield, Illinois 62706

NOV 20 1980

Christ Boettcher
R. R. 1
E. Alton, IL 62024

Pursuant to the provisions of Section 1039 of the Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111 1/2, § 1039) you are hereby notified that:

Chemetco, Inc. Applicant (Person or Company)
P. O. Box 187 Address
Alton, Illinois 62002 City & State

has applied to the Agency for a:

- | | |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | 1. Development Permit (This is a request for a processing and recovery permit. No landfill permit is requested.) |
| <input type="checkbox"/> | 2. Operation Permit |
| <input type="checkbox"/> | 3. Supplemental Permit |
| <input type="checkbox"/> | 4. Other |

- | | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | A. Develop a Site |
| <input type="checkbox"/> | B. Operate the Site |
| <input type="checkbox"/> | C. Modify Site Development |
| <input type="checkbox"/> | D. Modify Site Operation |
| <input type="checkbox"/> | E. To Receive Special Waste (generically described as:) |

At: Chemetco, Inc. Site Name
P. O. Box 187 Street or Road
Alton, Madison, Illinois Near (Municipality)
Alton, Madison, Illinois City, County, State

If you have any comments, please submit them in writing within thirty-five (35) days for Development and Operation Permits, or twenty-one (21) days for Supplemental Permits to:

Illinois Environmental Protection Agency
Land Permit Section, Division of Land/Noise Pollution Control
2200 Churchill Road
Springfield, Illinois 62706

NO

Thomas E. Cavanagh
Thomas E. Cavanagh, Jr., Manager
Land Permit Section
Division of Land/Noise Pollution Control

Photos Received 12/12/80
From Christ E. Boettcher

Reverse Caption:

"Liquid Pollution On

Our Farm

Photo 1 "

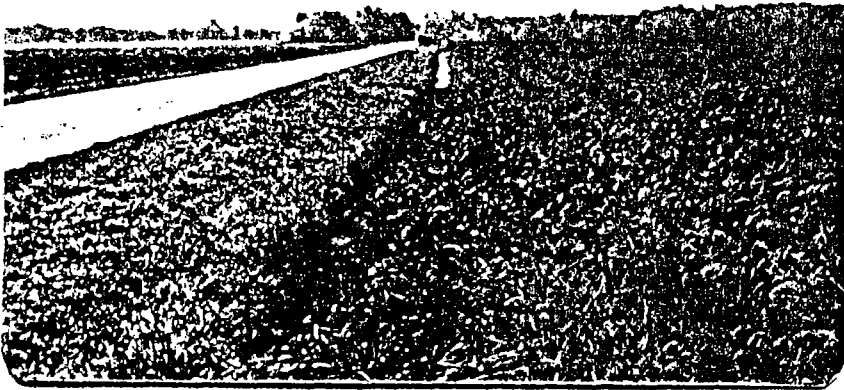


Reverse Caption:

" 2 Liquid
Pollution "

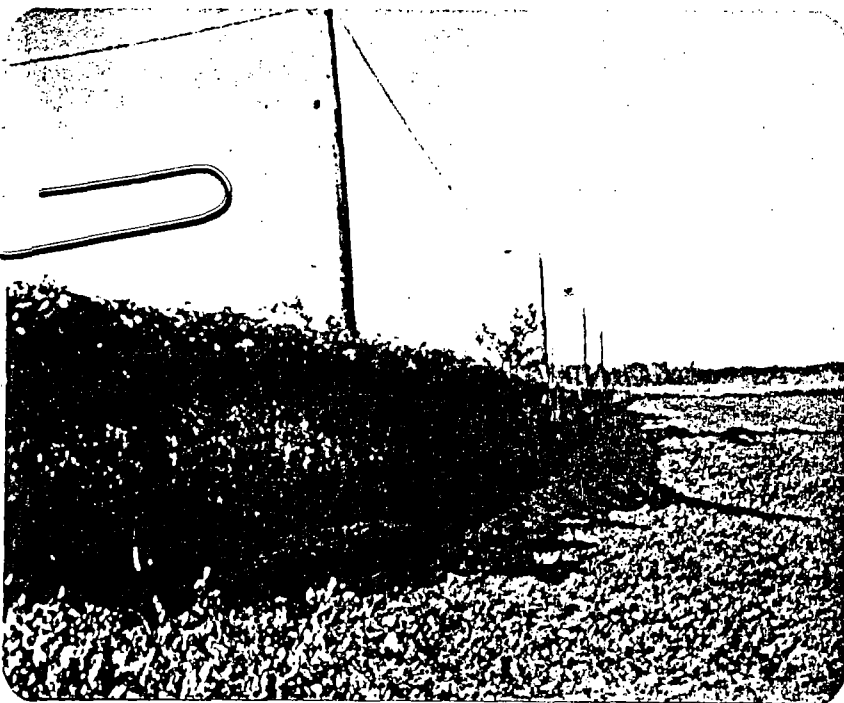


Reverse Caption:
"Liquiel Pollution
3"



Reverse Caption:

"4 Liquiel
Pollution"





Reverse Caption:

" 5 Liquid
Pollution "

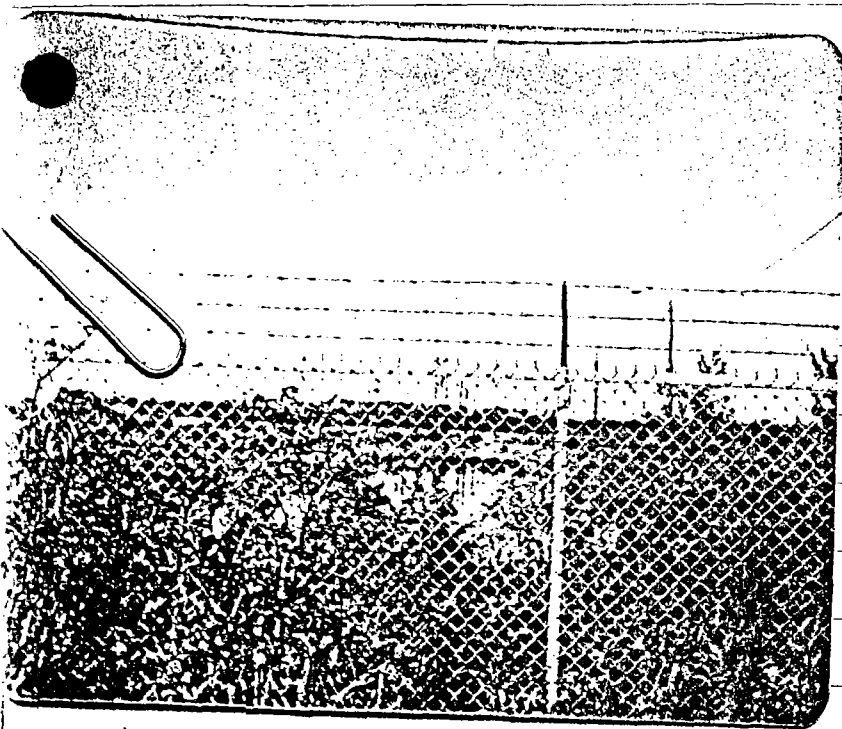


Reverse Caption:

" 6 Liquid
Pollution "

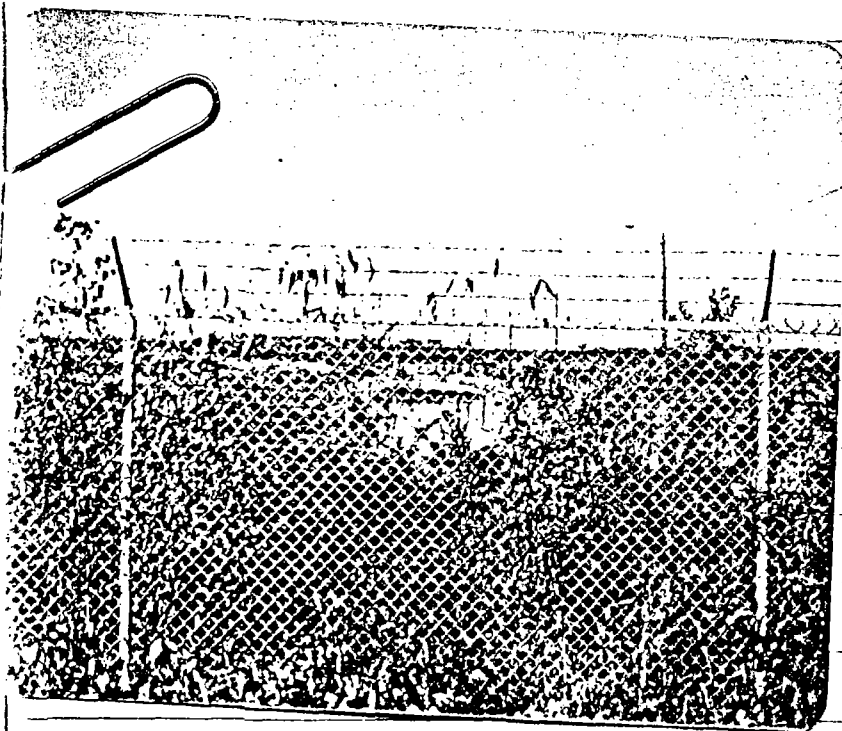
Reverse Caption:

"Cooling
Pond"



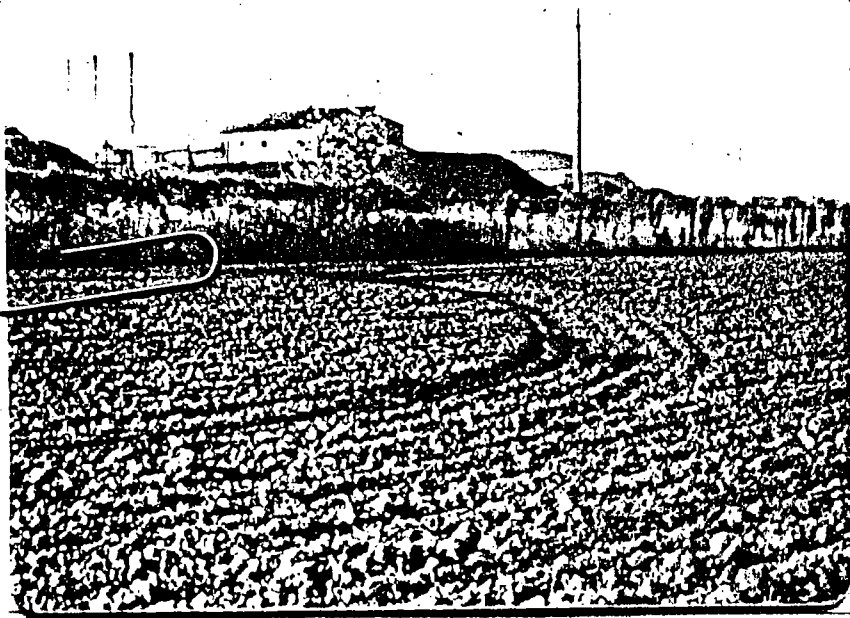
Reverse Caption:

"Cooling
Pond"



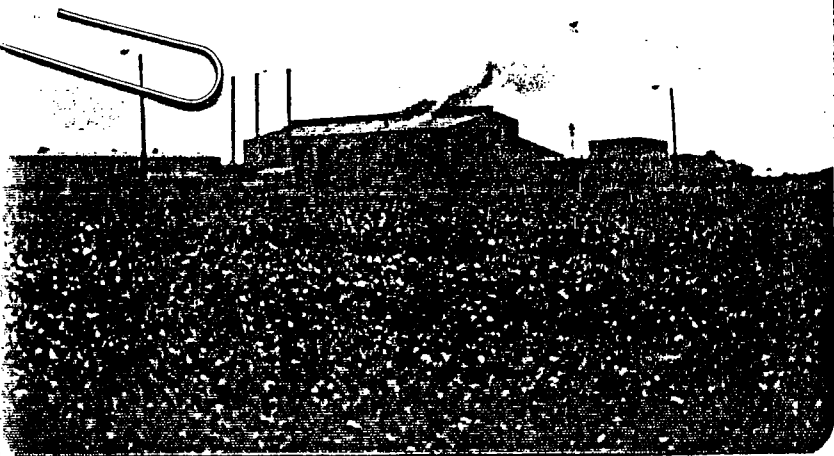
Reverse Caption:

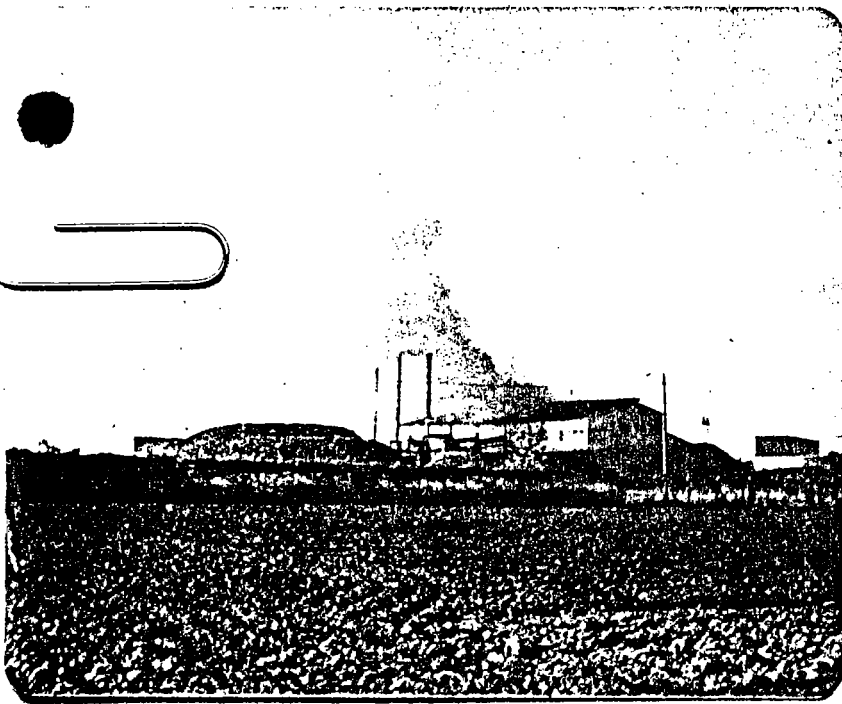
"Smoke"



Reverse Caption:

"Smoke"





Reverse Caption:

"Eye-Sore I

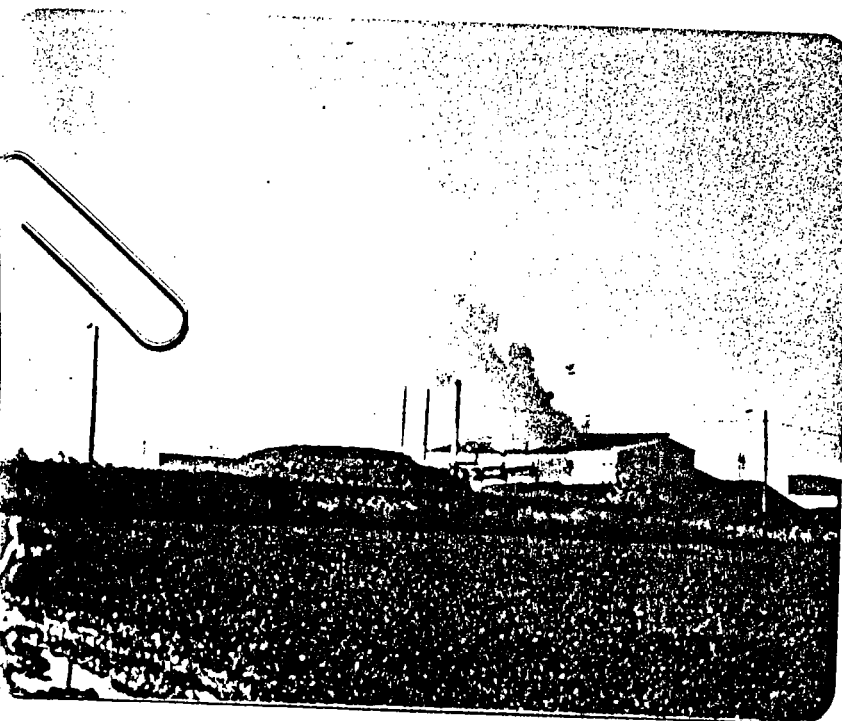
Look at Smoke

You Should

See it when its (sic)

Black

or Really Thick "



Reverse Caption:

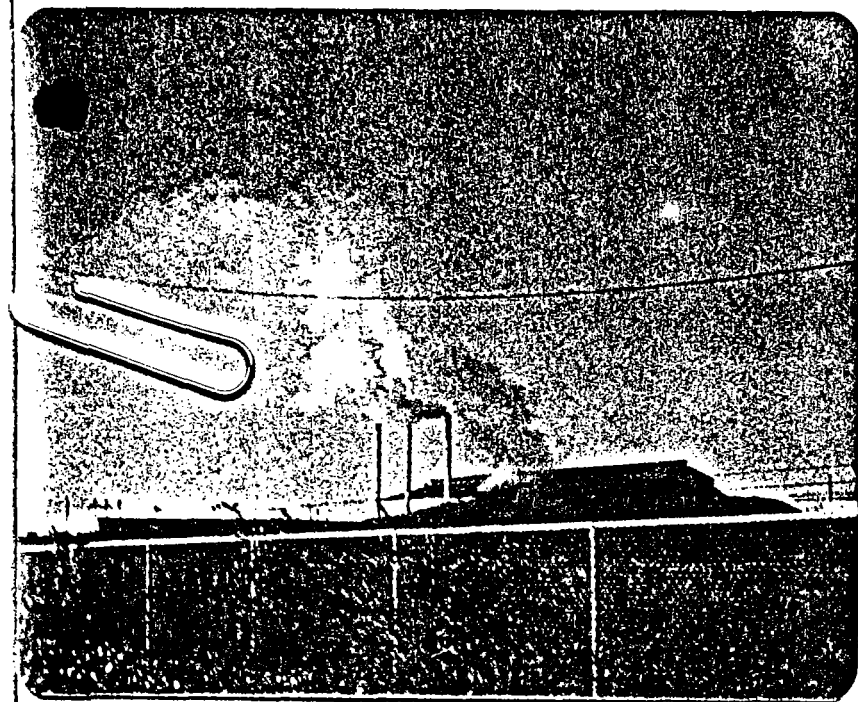
"Smoke

And Water

Pollution "

Reverse Caption:

"Smoke"





M. GERVICH & SONS
INCORPORATED

1840 CC
SCRAP IRON - METAL
STRUCTURAL STEEL

AREA CODE 515
PHONE 753-3359
901 EAST NEVADA STREET
P.O. BOX 67
MARSHALLTOWN, IOWA 50158

FAX (515) 753-3340
691

July 28, 2000

Regional Freedom of Information Officer
U.S. EPA, Region 5
77 West Jackson Boulevard (MRI-9)
Chicago, IL 60604-3507

RE: Information Request

Dear Sirs,

As you may know, on November 29, 1999, President Clinton signed into law the Superfund Recycling Equity Act (Public Law 106-113). This law clarifies Superfund to state that recycling is not disposal, and shipping for recycling is not arranging for disposal.

Under the new law, a recycler must exercise 'reasonable care' to determine that the consuming facility¹ where the material is sent for recycling is in compliance with substantive environmental requirements that are applicable to the recyclable material². This includes making inquiries to the appropriate federal, state, or local environmental agency regarding the compliance status of the consuming facility.

To comply with this requirement, I am requesting information on the compliance status of the following company as it relates to the handling storage and management of scrap materials at the company's facility: *RCRA*

Chemetco, Inc.
3754 Chemetco Lane
Hartford, IL 62048

Specifically, I am interested in finding out if the facility named above is currently meeting its compliance goals set forth in any consent order or administrative action which resulted from an enforcement action due to a Clean Air Act violation(s). *Air.*

Thank you in advance for your assistance. As this information is critical in demonstrating 'reasonable care', please provide the necessary statement or documentation by 20 calendar days after receipt of this letter to the address denoted in the letterhead.

Sincerely,

Kurt M. Jackson
Kurt M. Jackson
Environmental Compliance Officer
M. Gervich & Sons, Inc.

¹ A 'consuming facility' is the facility where the recyclable material was handled, processed, reclaimed, or otherwise managed. For example, a steel mill, paper mill, foundry, or even another scrap recycler can be considered a 'consuming facility'.

² This could include the handling, processing, reclamation, storage, or other management activity directly associated with the recyclable material.

6/RS

REGIONAL

HC

DIVISION _____ HOURLY WAGE _____ (from pay stub)

FEE CATEGORY **FEE DOLLARS** **ADMINISTRATIVE REPORTING OF FOIA**

☒ **COMMERCIAL USE REQUEST**
(Charge for Search, Review and Duplication)

☐ **EDUCATION & NON-COMMERCIAL SCI. INSTIT.**
(Charge for Duplication excluding first 100 pages)

☐ **REPRESENTATIVES OF THE NEWS MEDIA**
(Charge for Duplication excluding first 100 pages)

☐ **ALL OTHER REQUESTS**
(Charge for Search excluding first 2 hours and Duplication excluding first 100 pages)

CHECK MORE THAN ONE BOX IF APPLICABLE

☐ Subject Matter Expert/Responder

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☐ Legal Personnel (Concurrence Review)

☐ Contractor Support

I WORK ON FOIA (Check one)

☐ Part-Time (e.g., Collateral Duties)

☐ Full-Time

NOTE: A COMPLETED COPY OF THIS WORK SHEET MUST BE SENT TO THE REGIONAL FOIA OFFICE (MRI-9J) ALONG WITH THE REPLY LETTER. REPLIES MISSING COST INFORMATION MAY APPEAR ON THE OVERDUE LIST.

	ACTUAL COSTS *NOT BILLED TO REQUESTOR	BILLED TO REQUESTOR
SEARCH TIME (PER 15 MIN.) GS9 & UP-\$5.00 PER 1/4 HOUR GS8 & BELOW-\$2.00 PER 1/4 HOUR Fee Reduction (Subtract 2 hours)	Time _____ \$ _____ Time _____ \$ _____	Time _____ \$ _____ Time _____ \$ _____ Hours (Subtract 2) \$ _____
REVIEW TIME (PER 15 MIN.) GS9 & UP-\$5.00 PER 1/4 HOUR GS8 & BELOW-\$2.00 PER 1/4 HOUR	Time _____ \$ _____ Time _____ \$ _____	Time _____ \$ _____ Time _____ \$ _____
DUPLICATION Duplication@.15 per single page Duplication@.30 per 2-sided page Special Reproduction@Actual Cost Fee Reduction (100 pages)	Pages _____ \$ _____ Pages _____ \$ _____ Actual Cost \$ _____	Pages _____ \$ _____ Pages _____ \$ _____ Actual Cost \$ _____ Reduction \$ (-) _____
COMPUTER SEARCH & PRODUCTION GS9 & UP-\$5.00 PER 1/4 HOUR GS8 & BELOW-\$2.00 PER 1/4 HOUR COMPUTER USAGE DISKETTES @\$1.00	Time _____ \$ _____ Time _____ \$ _____ Actual Cost \$ _____ Diskettes _____ \$ _____	Time _____ \$ _____ Time _____ \$ _____ Actual Cost \$ _____ Diskettes _____ \$ _____
AUTHENTICATION Certification/Authentication	\$25 \$ _____	\$25 \$ _____
OTHER NONBILLABLE COSTS (CALCULATE AT HOURLY RATE) RESPONSE PREPARATION PHONE COMMUNICATIONS CONCURRENCE MANAGERIAL CONCURRENCE CONDUCT FILE REVIEW MAILING COSTS (actual cost) OTHER (Specify _____)	Time _____ \$ _____ Time _____ \$ _____ Time _____ \$ _____ Time _____ \$ _____ Time _____ \$ _____ Actual cost \$ _____ Cost \$ _____	



FREEDOM OF INFORMATION REQUEST

**Expeditious
Handling
Required**

Return to: Freedom Of Information Coordinator
Information Management Branch
Telephone (312) 886-6686
Routing: DMI-9J

Mr. John Suarez
Vice President
Chemetco, Incorporated
P.O. Box 187
Alton, Illinois 62002

Re: Freedom of Information Act Request
RIN-8-85

Dear Mr. Suarez:

This is in response to your Freedom of Information Act request dated December 12, 1984. In your letter you requested a copy of the (Resource Conservation and Recovery Act (RCRA) inspection report from the inspection performed on June 14, 1984, and a copy of the analytical results prepared from samples collected on October 16, 1984, at the Chemetco facility.

We are transmitting the requested Resource Conservation and Recovery Act inspection, dated June 14, 1984. As of this date, the analytical results on the samples taken on October 16, 1984, have not been received by the United States Environmental Protection Agency. Please resubmit your request after March 1, 1985, if you still desire these analytical results.

Also enclosed is a Bill for Collection on which the fees for this request have been itemized. Please return the top portion of the billing form with your check or money order in the amount of \$13.00, payable to the United States Environmental Protection Agency, and forward your remittance to the address listed on the billing form. Payment is due within 30 days.

Please contact Mr. Gary Westefer, of my staff, at (312) 886-7450, if you have any questions or are in need of further assistance.

Sincerely,

Basil G. Constantelos, Director
Waste Management Division

Enclosures

cc: Illinois Environmental Protection Agency

bcc: N. Sullivan, OPA
P. Norman, FOS
C. Kavcic, WMD
M. Pierard, HNEB
✓ File

5HI:MMB:RAIU:NESTEFER:NESTEFER: 1/20/85

A-1

Freedom of Information Act Request

05-RIN-01840-00

Requestor: KURT JACKSON Request Date: 07/28/2000
Company: M.GERVICH & SONS Date Received: 08/01/2000

Fee Category: Commercial Acknowledged: 08/01/2000

Subject: CHEMETCO

Lead Office:

Assigned to: 05-AIR, 05-WATER, 05-WPT

Original Due Date: 08/29/2000 New Due Date:

Track: BASIC

Fee Waiver
Requested:

FIS Initials: GC

SPECIAL INSTRUCTIONS:

1. SEPARATE REPLIES 2. LEAD
OFFICE ISSUE COMBINED BILLING
3. PROGRAM OFFICE SEND YOUR
BILLING TO WPT, MARY
VILLARREAL, HSM-7J-6-4739. 4.
CALL REQUESTER WITH COST
ESTIMATE

ayh
RECEIVED

REC'D BY:

AUG 07 2000

Water Enforcement &
Compliance Assurance Branch
DATE U.S. EPA, Region 5

